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TARR & McMURRY'S GEOGRAPHIES

SUPPLEMENTARY VOLUME

MARYLAND

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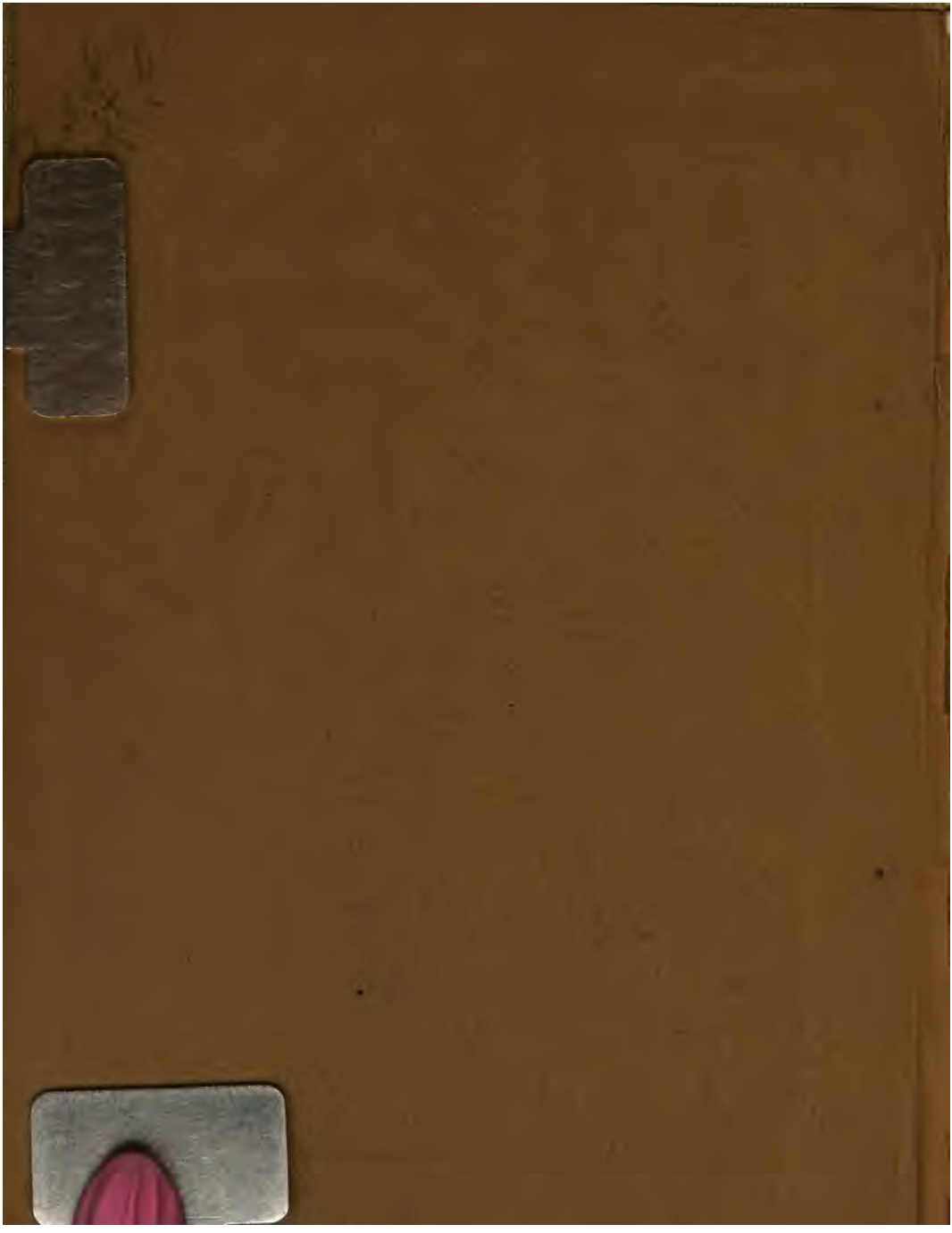

MARYLAND

The
Co

TARR AND McMURRY GEOGRAPHIES

SUPPLEMENTARY VOLUME

MARYLAND

BY

M. W. TWITCHELL, PH.D.

(JOHNS HOPKINS)

GEOLOGIST ON THE STAFF OF THE MARYLAND GEOLOGICAL SURVEY

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Set up and electrotyped. Published February, 1906.
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PREFACE

In writing this Supplement the endeavor has been made to produce a work which shall have an independent value as a geography of Maryland, and at the same time conform as far as possible to the principles which governed the writing of the Series. The plan of the work involves, after a brief introductory part of a general character, a detailed discussion of each of the three great regions into which Maryland is naturally divided when its physiography, natural resources, and industries are considered. Every opportunity has been embraced to bring out the relationship existing between the physiographic features and natural resources and the occupations and activities of the people in each region discussed.

Teachers of schools located in either the Piedmont Plateau or the Coastal Plain would do well to take up the study of their own region immediately after finishing the Introductory Section. This will be carrying the idea of "home geography" into the larger sphere of the adjacent region. Schools located in the Appalachian Region will not have to make any change. The endeavor has been made to incorporate as many brief type studies of particular industries as the limited size of the work would permit. It is suggested that teachers make free use of these type studies and supplement them with others by consulting the works of reference mentioned in the Appen-

dix. It will be noticed that the Review Questions are grouped together under the paragraph headings and can therefore be used either after each parapraph or after each section as desired. Attention is called to the order of treatment of the various industries in each of the three physiographic divisions, the principal industry being treated first, also to the large number of towns receiving special notice, and to the rather full treatment of the transportation facilities within each region.

Professor McMurry, one of the authors of the Series, and Miss Persis K. Miller of the Teachers' Training School of Baltimore have each gone over the work with the writer and made valuable criticisms and suggestions which are hereby heartily acknowledged. The author and publishers desire to make special acknowledgment of their obligation to Professor William Bullock Clark, Director of the Maryland Geological Survey, for permission to use a large number of Survey illustrations and for access to and freedom in making use of the publications and records of the Survey.

Acknowledgments are also due to A. B. Hoen and Company for the use of the illustration on the oyster industry (Fig. 40); to J. G. Harrison and Sons for the illustration of young apple trees at their nurseries at Berlin, Maryland (Fig. 37); to J. W. Schaffer for the use of the panoramic view of Baltimore Harbor (Fig. 26); to the publishers of "Maryland As It Is" for the use of the illustrations of the tobacco field (Fig. 38), the strawberry field (Fig. 36), and the peach orchard (Fig. 17); and to the American View Company for the use of a number of Baltimore views.

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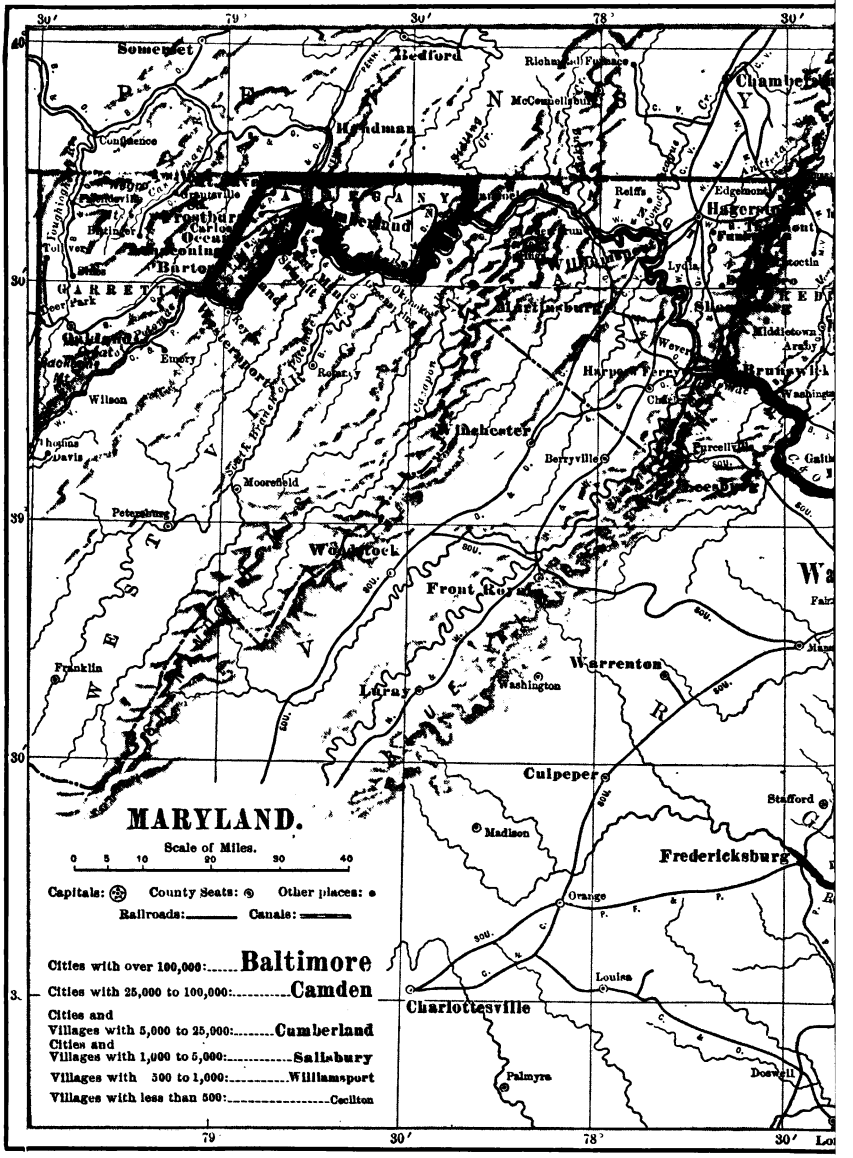
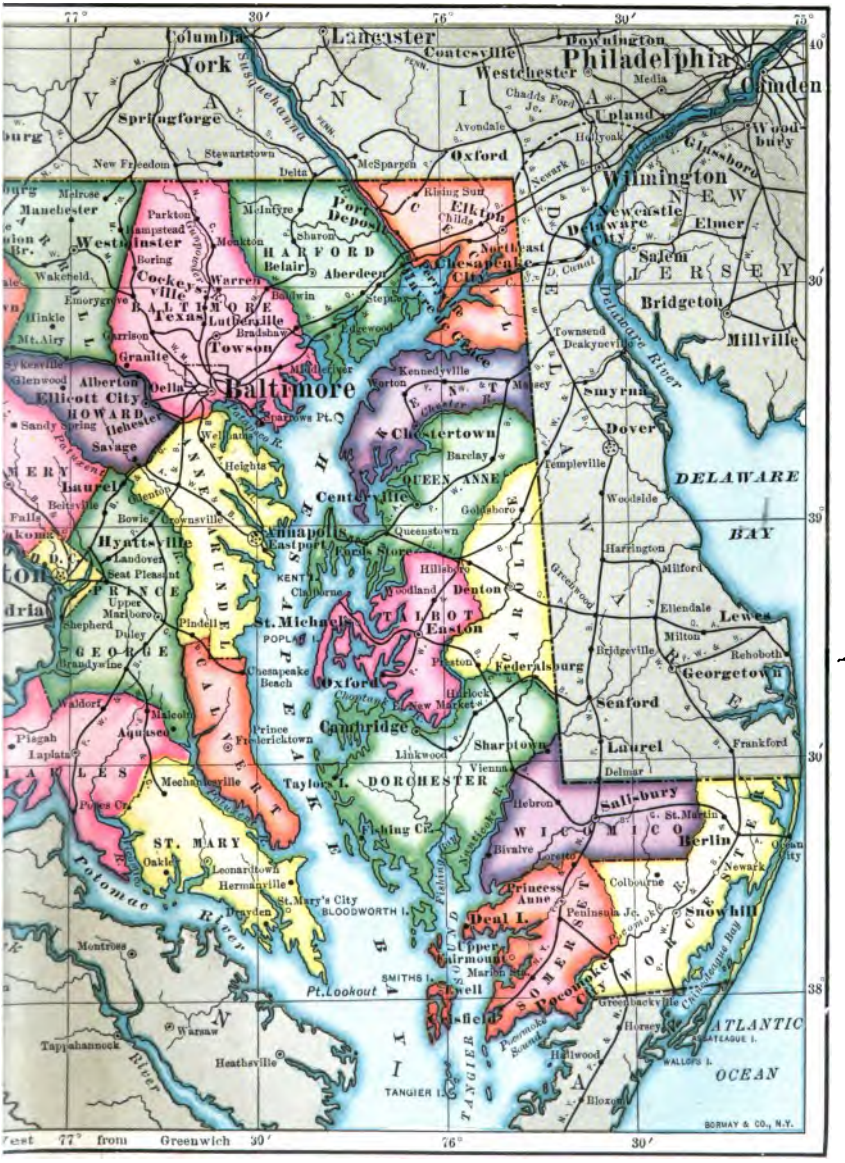

MARYLAND.
Scale of Miles.
0 5 10 20 30 40
Capitals: ⊛ County Seats: ⊙ Other places: •
Railroads: Canals:
Cities with over 100,000: Baltimore
Cities with 25,000 to 100,000: Camden
Cities and Villages with 5,000 to 25,000: Cumberland
Cities and Villages with 1,000 to 5,000: Salisbury
Villages with 500 to 1,000: Williamsport
Villages with less than 500: Cecilton
Somerset
Bedford
Richardsdale Furnace
McConnellsburg
Huntingdon
Greensville
Reiffs
Edgemont
Hagerstown
Lydia
Martinsburg
Middletown
Harpers Ferry
Charlestown
Shepherdstown
Berryville
Purcellville
Leesburg
Moorefield
Petersburg
Wardrock
Front Royal
Warrenton
Washington
Luray
Franklin
Culpeper
Stafford
Madison
Fredericksburg
Orange
Louisa
Charlottesville
Palmyra
Doswell
Wilson
Thomas
Davis
Emory
Rotary
Piedmont
Grantsville
Confluence
Tollvers
Deer Park
Oakland
Barton
Frostburg
Carlos
Oregon
Bittinger
GARRETT
Cherry Run
Sleepy Creek
Back Creek
Opequon Creek
Shenandoah
Potomac
Rappahannock
Rapidan
Rivanna
Hardy
Pendleton
Highland
Augusta
Rockingham
Page
Shenandoah
Warren
Fauquier
Rappahannock
Culpeper
Orange
Louisa
Albemarle
Greene
Madison
Green
Rockingham
Augusta
Bath
Alleghany
Botetourt
Roanoke
Craig
Giles
Monroe
Summers
Greenbrier
Pocahontas
Tazewell
Mercer
McDowell
Wyoming
Logan
Boone
Kanawha
Fayette
Raleigh
Wyoming
Mingo
Wayne
Cabell
Putnam
Mason
Jackson
Roane
Calhoun
Gilmer
Braxton
Clay
Webster
Nicholas
Fayette
Greenbrier
Pocahontas
Monroe
Summers
Mercer
McDowell
Wyoming
Logan
Boone
Kanawha
Raleigh
Wayne
Cabell
Putnam
Mason
Jackson
Roane
Calhoun
Gilmer
Braxton
Clay
Webster
Nicholas
Upshur
Randolph
Barbour
Tucker
Preston
Taylor
Harrison
Doddridge
Ritchie
Wirt
Wood
Pleasants
Tyler
Marshall
Ohio
Brooke
Hancock
Monongalia
Marion
Harrison
Taylor
Preston
Tucker
Barbour
Upshur
Randolph
Lewis


Columbia
Lancaster
Contesville
Downington
Philadelphia
York
Westchester
Media
Camden
Springforge
Chadds Ford Jc.
Upland
Woodbury
Avondale
Hollyoak
Gloucester
New Freedom
Stewartstown
Delta
McSparren
Oxford
Wilmington
Rising Sun
Elkton
Manchester
Melrose
Parkton
Hampstead
McIntyre
Port Deposit
Newcastle
Delaware City
Elmer
Westminster
Sharon
Boring
Monkton
HARFORD
Belair
Aberdeen
Chesapeake City
Salem
Wakefield
Warren
Baldwin
Cockeysville
Stepney
Emorygrove
Texas
BALTIMORE
Bridgeton
Hinkle
Lutherville
Mt. Airy
Garrison
Towson
Bradshaw
Edgewood
Townsend
Deakyneville
Millville
Granite
Alberton
Delta
Middle River
Kennedyville
Glenwood
Baltimore
Norton
Massey
Smyrna
Ellicott City
Sparrows Pt.
Chestertown
Dover
Sandy Spring
Savage
Wellham
Heights
Barclay
Templeville
Laurel
Centerville
QUEEN ANNE
DELAWARE
Woodside
Goldsboro
Queenstown
Annapolis
Eastport
Hyattsville
Landover
Forks Store
Harrington
BAY
Seat Pleasant
Hillsboro
Milford
KENT
Woodland
Denton
Claiborne
Ellendale
Lewes
Upper Marlboro
Pindell
St. Michaels
TALBOT
Easton
Milton
Shepherd
Duley
Bridgeville
Rehoboth
GEORGE
Granglywine
Chesapeake Beach
Oxford
Preston
Federalsburg
Georgetown
Waldorf
Malcolm
Hillock
Seaford
Aquasco
Cambridge
New Market
Plagah
Prince Fredericktown
Sharptown
Laurel
Frankford
Lapiata
Linkwood
Vienna
Delmar
Taylors I.
DORCHESTER
Salisbury
Mechanicsville
Pynes Cr.
Hebron
WICOMICO
St. Martin
ST. MARY
Fishing Cr.
Bivalve
Herlin
Oakley
Leonardtown
Hermanville
Princess Anne
Colbourne
Newark
Potomac River
St. Mary's City
BLOODWORTH I.
Deal I.
Peninsula Jc.
Snowhill
Dryden
Upper Fairmount
Montross
SMITHS I.
Marion
Pt. Lookout
Ewell
Crisfield
Greenbackville
Warsaw
Tappahannock
Heathsville
Hallwood
ATLANTIC
OCEAN
WALLOPS I.
TANGIER I.
West 77° from Greenwich
30′
76°
30′
BORMAY & CO., N.Y.

MARYLAND STATE SUPPLEMENT

SECTION I

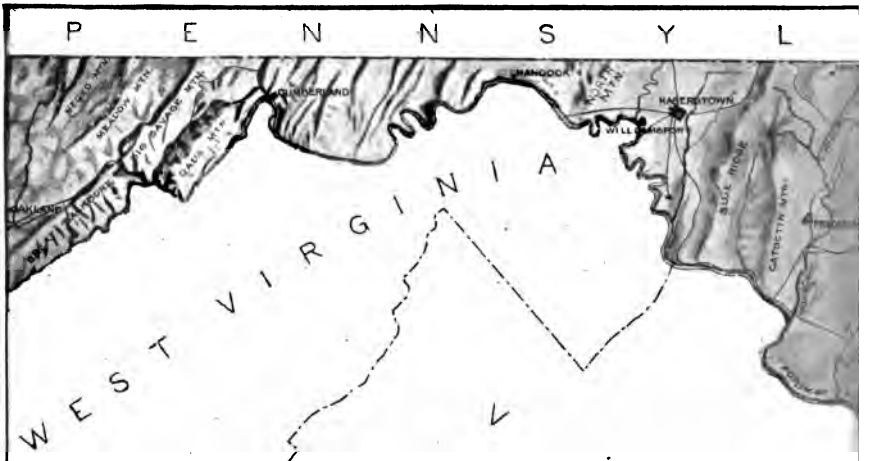
INTRODUCTORY

Location, Boundaries, and Size. — You are now going to study the geography of your own state. On your map of the United States find Maryland. To what group of states does it belong? What other states touch Maryland? What body of water washes a part of its eastern border? What noble river separates it from Virginia and West Virginia? The boundary line is not the middle of the Potomac, but the south bank, therefore the whole river lies in the state of Maryland. The western boundary line runs north from the source of the Potomac to the Pennsylvania line; but the exact source of the Potomac has never been positively settled, so the boundary is not yet finally determined. What is the latitude of the northern boundary of Maryland? This northern line is called the Mason and Dixon Line, after the men who surveyed it, and is a famous line in history. Which is the largest of the Middle Atlantic States? Which is the smallest? Maryland is one of the smaller states in the Union; but there are seven states which are smaller. Find out from the tables in the back of your geography which these are. The total area of Maryland is 12,210 square miles, which is about half that of West Virginia and one-fourth that of New York. Texas, the largest state in the Union, is

twenty times the size of Maryland. Of Maryland's 12,210 square miles, 9860 are land and 2350 water. For its size, it has more water surface than almost any other state. The total length along the northern border is 198 miles, while owing to the irregular course of the Potomac River, the width from north to south varies remarkably, being about 123 miles at the mouth of the Pocomoke River, but only about 3 miles at Hancock. If you were on top of a high mountain north of Hancock what states would you be able to see?

Surface Features. — One of the most striking facts about Maryland is the great variety of its surface features. The small area of the state is so spread out that it extends from sand bars and low-lying plains near the sea to high mountainous regions 3000 feet above the sea. In the midst of this variety of surface features there can easily be recognized three quite distinct *physiographic divisions:* (1) the Appalachian Region or Western Maryland, the mountainous region of the state; (2) the Piedmont Plateau or Northern Central Maryland, the rolling or hilly region of the state; and (3) the Coastal Plain or Southeastern Maryland, the low, nearly level region of the state. Each of these divisions has its own characteristic surface features and natural resources, and these have had a great influence upon the character and occupation of the people in each, and upon the history and growth of the state. We shall study each of these divisions more fully hereafter.

Climate. — The climate of Maryland exhibits quite a little variety, due to the variety of the surface features, to the central location of the state, to its nearness to the Atlantic Ocean, and to the existence in the heart of the



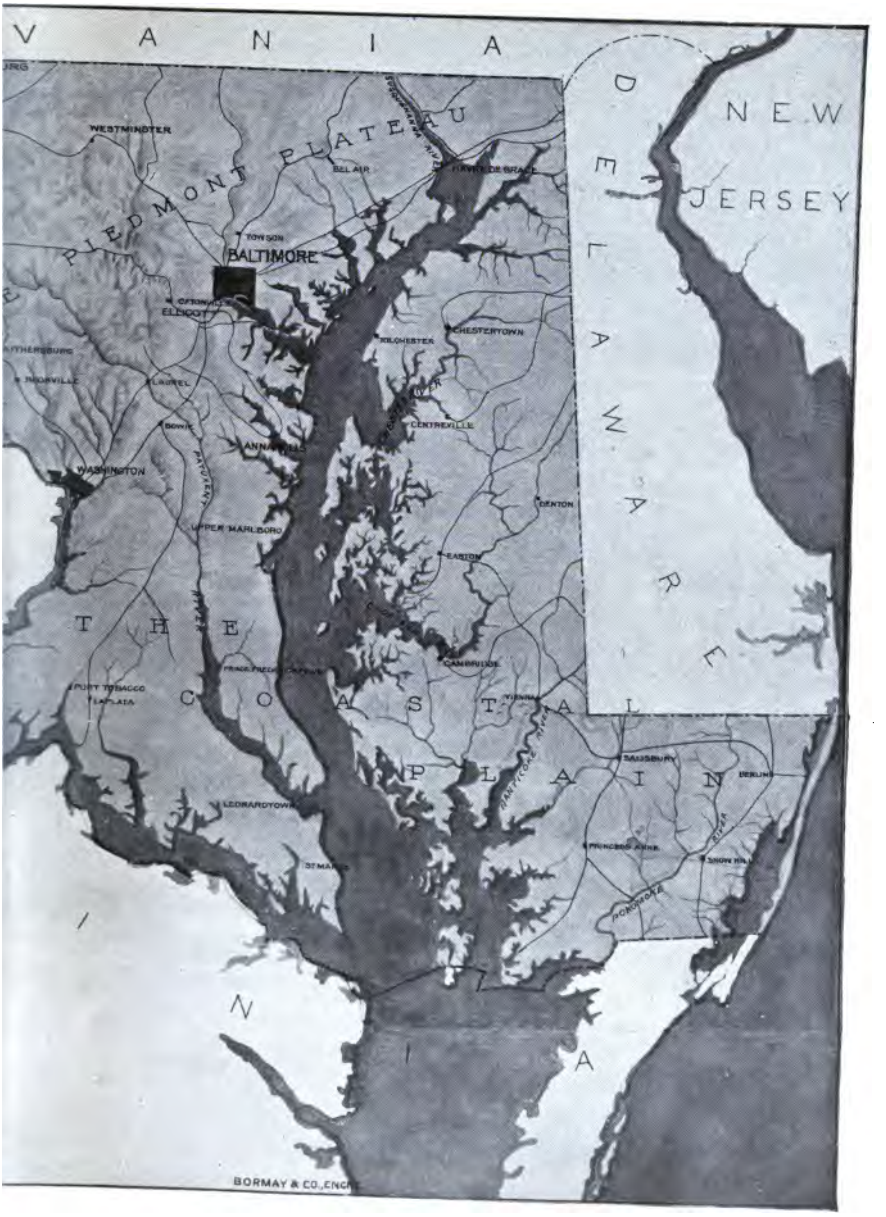
RELIEF MAP
OF
THE STATE OF MARYLAND

PHOTOGRAPHED FROM A MODEL

SCALE OF THE MODEL

Horizontal Scale, 1½ Miles to the Inch; Vertical Scale, 1600 Feet to the In

Proportion 1:6.


V A N I A
PIEDMONT PLATEAU
WESTMINSTER
BEL AIR
TOWSON
BALTIMORE
ELLICOTT
CHESTERTOWN
KINGSTON
CENTREVILLE
ANNAPOLIS
WASHINGTON
UPPER MARLBORO
DENTON
EASTON
CAMBRIDGE
PORT TOBACCO
LA PLATA
LEONARDTOWN
ST MARYS
SALISBURY
PRINCESS ANNE
SNOW HILL
D E L A W A R E
NEW JERSEY
T H E
C O A S T A L
P L A I N
N I A
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state of the great basin of the Chesapeake. However, these large bodies of water also help to make the climate more uniform, and so we find that, as a whole, the state is free from great extremes of heat or cold. In the eastern and southern parts of the state the winters are mild and the summers are hot, while in the more elevated western portion the winters are quite cold and the summers are delightfully cool. There is a difference of about a month in the coming of spring in the extreme eastern and western ends of the state. The average *temperature* for the year differs in different sections of the state, being several degrees lower in the northern and western divisions than in the southern and eastern sections. The *rainfall* is quite uniform throughout Maryland. Its geographical position, almost in the direct course of the usual storms, whether from the southwest or the lake region, gives it a rainfall in all seasons sufficient in amount for the needs of commerce and agriculture. The *winds* in Maryland blow from the west as a rule; but in summer they are more likely to come from the south, and in winter from the northwest and west, especially in the eastern and central portions of the state.

Natural Resources. — *Plant Life.* — Among the Maryland forest trees of interest are the oak, hickory, walnut, maple, pine, spruce, tulip tree, locust, chestnut, beech, gum, and wild cherry. Of the smaller trees the persimmon, sassafras, red cedar, magnolia, dogwood, and chinquapin are plentiful. The most common climbing plants are the grape, Virginia creeper, trumpet vine, and morning-glory. The poison ivy or poison oak is to be seen on fences and tree trunks everywhere, especially in the eastern part of the state, and its shiny leaflets in groups of three should

be known by all to be avoided. Among the native small fruits the wild strawberry, blackberry, huckleberry, and cranberry are abundant and are sent in large amounts to the markets. Many beautiful flowering plants grow wild throughout the state, among which are the trailing arbutus, many species of violets, and azalea or "wild honeysuckle" of spring; the wild rose and American laurel of summer; and the fringed gentian and goldenrod of fall.

Animal Life.—Of the larger animals deer, black bears, and wild-cats are occasionally seen in the wilder portions of the state. Among the smaller forms are found rabbits, squirrels, foxes, ground-hogs or "woodchucks," weasels, otters, opossums, moles, etc. Many species of harmless snakes are found, including the spreading adder and the black snake, while only three poisonous snakes are known —the copperhead, rattlesnake, and water-moccasin. Of these the most dangerous is the copperhead, as it attacks without warning. Maryland is famous for its game and song birds. Of the game-birds the ducks are the most important. They come from the Hudson Bay and northern lake region and make the Chesapeake their winter home, attracted in part by the wild celery which grows in the shallow waters of the Bay and its tributaries. Among these ducks the famous canvasback is most sought after, while several other kinds also occur in great numbers. Among the other game-birds are reed-birds, the "bob-white" or partridge, and the ruffed grouse or pheasant. Among the numerous smaller birds we can mention only the mocking-bird, the cardinal-bird, and the Baltimore oriole, which are the best-known song-birds. The last named is a beautiful bird, clad in gold and black, suggestive of the colors of Lord Baltimore, whence its name.

MAP SHOWING
RESOURCES
OF
MARYLAND
Note: No attempt has been made to show the distribution of each product within the confines of a county. The lists of agricultural products were prepared by the U. S. Department of Agriculture, Bureau of Soils and by the Maryland Agricultural College, and the mineral products by the Maryland Geological Survey.
Scale of Miles
0 10 20 30 40 50
CONTINUATION OF WESTERN PART OF MARYLAND
Longitude West from Greenwich
WEST VIRGINIA
PENNSYLVANIA
NEW JERSEY
DELAWARE BAY
Baltimore
Washington
Annapolis
Hagerstown
Frederick
Cumberland
Wilmington
Dover
FREDERICK
HOWARD
MONTGOMERY
HARFORD
CECIL
KENT
QUEEN ANNE'S
TALBOT
CAROLINE
DORCHESTER
SOMERSET
WORCESTER
WICOMICO
ALLEGANY
GARRETT
ANNE ARUNDEL
CALVERT
CHARLES
ST. MARY'S
PRINCE GEORGE'S
D.C.
Potomac River
Susquehanna River
Patapsco River
Chesapeake Bay
Delaware River
ATLANTIC OCEAN
BERNAY & CO., N.Y.

FIG. 3.

It makes a beautiful nest and has been so much sought after by curiosity hunters that it is now protected by special laws. Of aquatic or water animals Maryland has many valuable forms, which will be mentioned in connection with the fisheries.

Minerals. — Maryland, though small, has considerable variety in its mineral wealth. Coal, clays, building stones, limestones, and "cement rock" are the most important mineral products in the order given. These and others of minor importance will be discussed later in connection with the regions in which they occur.

History. — Maryland was *settled* in 1634 by a party of colonists sent out from England by Cecilius Calvert, Lord Baltimore, under the leadership of Leonard Calvert. The first settlement was at St. Mary's on the St. Mary's River. Lord Baltimore had received the grant of land from King Charles I of England, who also granted many unusual liberties. Among these was *freedom from taxation*, the only tax required being "two Indian arrows yearly and a fifth of all gold and silver that might be found." One of the most striking features of the Maryland colony was that of *religious freedom*. This was granted by Lord Baltimore, who was a Catholic, but who wanted all men to live in peace and worship God in their own way, and was also confirmed by the colonists in the "Toleration Act" of 1649. One of the earliest accounts of the province was written by George Alsop, in which was contained the curious map which you see here. Shortly after 1675 grants of land were made to William Penn, which included some that had already been given to Lord Baltimore. This led to *boundary disputes*, which lasted for almost one hundred years, when finally settled by a compro-

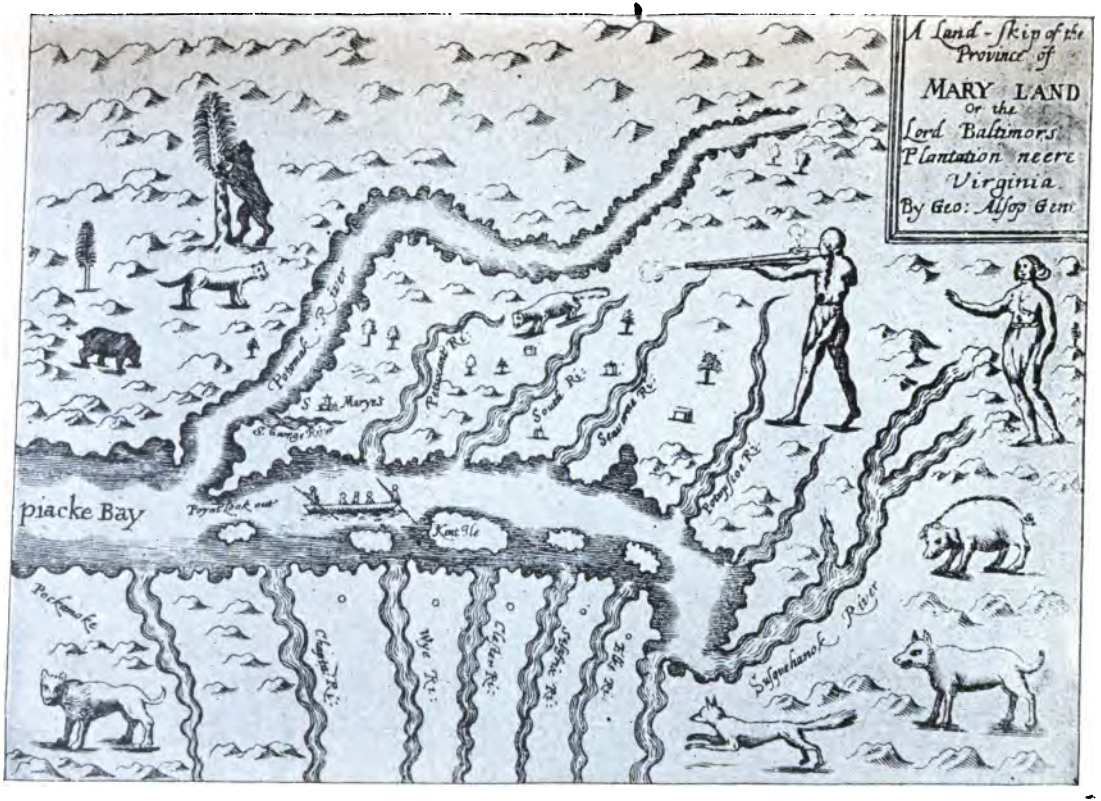

FIG. 4.

Old map of Maryland, by Alsop.

mise. Two noted English astronomers, Mason and Dixon, were then sent for, and spent four years (1763–1768) in running and marking the boundary line with which their names will always be associated. They did not quite finish the work, being stopped by the Indians, who became suspicious at their looking so often at the stars through their "big guns" or telescopes. The Mason and Dixon line became famous during the Civil War as the dividing line between the North and the South.

Maryland took but little part in *the French and Indian War*. Washington and Braddock fitted out their expedition against Fort Duquesne (Pittsburg) at Frederick. The original barracks which they used are still in existence. Maryland's share in *the Revolutionary War* was an honorable one, although not especially conspicuous. The most famous incident was the burning of the *Peggy Stewart*, a vessel which came to Annapolis with a cargo of tea, at a time when the colonists were angry over unjust taxes, the Stamp Act, etc. The people refused to allow the tea to be landed, and finally in open day forced the owner of the vessel to apply a torch to it. The *Peggy Stewart* burned to the water's edge, and ever since Marylanders have celebrated October 19 as Peggy Stewart's Day. In the battle of Long Island, August 27, 1776, the Maryland troops covered the retreat of General Washington's army, and a monument to their valor stands in Prospect Park, Brooklyn, New York. This monument is inscribed :—

IN HONOR OF
MARYLAND'S FOUR HUNDRED,
WHO ON THIS BATTLEFIELD,
AUG. 27, 1776,
SAVED THE AMERICAN ARMY.

After the Revolution, Maryland was the last of the thirteen states to come into the Union; but it was the first to demand the giving of the public lands which belonged to the states to the national government, which made it possible to form the great states between the Alleghanies and the Mississippi River. During *the War of 1812* several Maryland towns were pillaged by the British; but Baltimore was saved from the fate of Washington by the repulse of the enemy at North Point and

FIG. 5.
Fort McHenry, Baltimore Harbor.

Fort McHenry. Battle Monument in Baltimore was erected to the memory of the men who fell in defence of the city. During the attack on Fort McHenry, while he was a prisoner on board a British vessel in the harbor where he could see the whole affair, Francis Scott Key, a prominent Maryland lawyer, wrote "The Star-Spangled Banner." Maryland was not very much of a battle-ground during *the Civil War*, only three battles of any consequence being fought on Maryland soil. These were the battles of South Mountain and Sharpsburg or Antietam in 1862, and the Monocacy in 1864. Maryland soldiers

distinguished themselves in the armies on both sides of the contest. Maryland took an active part during *the Spanish War.* It furnished 3110 soldiers and sailors. The Maryland Naval Militia, numbering about 450 officers and men, played the most conspicuous part. The men served on various vessels, the largest number being on the *Dixie*, whose cruise extended from June 13 to September 30, 1898, during which time the ship many times engaged the enemy and made some captures. Maryland also takes pride in the brilliant Spanish War career of one of its foremost citizens, Admiral Schley, whose victory at Santiago was the crowning event of the war.

REVIEW QUESTIONS ON INTRODUCTORY SECTION. — What other states touch Maryland? What waters help form its boundaries? Tell what you know about the Mason and Dixon line. Does the Potomac lie in Maryland or Virginia? What is the area of Maryland? How does it rank in size among the states? How does it vary in width from north to south? Name the three natural divisions into which Maryland can be divided on the basis of its surface features. What causes the variety in the climate of Maryland? What differences exist in the climate of the eastern and western parts of the state? Why does Maryland have a more uniform rainfall than many other states? Name some of the forest trees of Maryland; climbing plants; native small fruits; wild flowers. What additional wild flowers are found in your neighborhood? Name some of the large and small animals of Maryland; game-birds. Why do the wild ducks come to Chesapeake Bay? Name the three best-known song-birds of Maryland. Tell something about the Baltimore oriole. Name some of the important minerals of Maryland. Tell about the settlement of Maryland. What two great privileges were early granted to the colonists in Maryland? Tell about the boundary dispute between Pennsylvania and Maryland. What part did Maryland soldiers take in the Revolutionary War? War of 1812? Spanish War? Tell about the *Peggy Stewart;* Francis Scott Key; the *Dixie;* Admiral Schley.

SECTION II

THE APPALACHIAN REGION OR WESTERN MARYLAND

Surface Features. — The Appalachian Region extends from the western border of the state to the eastern base of Catoctin Mountain, which lies in Frederick County just east of the Blue Ridge proper. It includes Garrett, Allegany, Washington, and a part of Frederick counties. This is the high mountainous portion of the state, consisting of parallel even-topped mountain ridges alternating with deep and usually narrow valleys. The mountain ridges nearly all run in a direction from north-northeast to south-southwest, and their level sky-lines are rarely interrupted except where the larger streams have cut deep gorges across them. Some of the ridges extend across the state, others are the ends of ridges which have their chief development in Pennsylvania or West Virginia. Ages ago powerful forces within the earth set to work and folded up the rocks in this region into great folds. Since then the slow but sure work of the rain, the heat, the frost, and the streams, continuing through many thousands of years, has worn down the original hills and valleys to a great plain, and then going still further, picking out the hard and soft rocks with almost human intelligence, carved out the present valleys and left the harder rocks as intervening ridges. As one looks out from the top of some high point and sees ridge after ridge succeeding each other like gigantic waves on a great ocean, the

even tops and uniform heights of the ridges speak in eloquent terms of the old plain and the long-drawn-out war between the elements and the so-called "everlasting hills."

There are certain noticeable differences in the surface features in different portions of the Appalachian Region. In Garrett County the mountains rise from an elevated plateau, known as *the Alleghany Plateau*, which is part of the plateau of the same name extending north and south of Maryland. This region is somewhat less rugged than that immediately to the east. The average altitude of the plateau is about twenty-five hundred feet, which is higher than most of the mountains to the east. Above the plateau a few of the ridges rise to over three thousand feet. Among the highest ridges are Negro Mountain, Meadow Mountain, Great Backbone Mountain, Big Savage Mountain, and Dans Mountain. On the more level portions of the plateau the drainage is more or less imperfect, and large, swampy areas exist which are known as "the glades." To the east of the high plateau just described, extending as far as and including North Mountain, is a very rugged region formed by the numerous *Alleghany ridges*, which rise to about eighteen hundred feet in height, between which are deep, narrow valleys. Among the chief ridges are Wills Mountain, Warrior Mountain, and Town Hill in Allegany County, and Sideling Hill, Tonoloway Ridge, and North Mountain in Washington County. Lying between North Mountain and the Blue Ridge is *the Hagerstown Valley*, the largest valley in the Appalachian Region. It is the Maryland portion of what is known as the Great Valley, which extends into Pennsylvania as the Cumberland Valley, and into Virginia

as the Shenandoah Valley. The Hagerstown Valley is a broad, even, shallow valley, over twenty miles wide, with a gently rolling floor. The tops of the low hills which dot the valley are so strikingly even it seems almost level when viewed from some commanding height like Pen Mar. Between the Hagerstown Valley and the Piedmont Plateau lie the two most eastern of the Appalachian Mountain ridges — *the Blue Ridge* and *Catoctin Mountain.* They are nearly parallel ridges which are separated by the narrow Middletown Valley. The Blue Ridge is the higher of the two with an average elevation of about two thousand feet, but rising at Mount Quirauk, near Pen Mar, to about twenty-four hundred feet. The only gaps through it occur at the Pennsylvania line at Pen Mar and at the West Virginia line at Weverton. The Blue Ridge continues south into Virginia under the same name, and north into Pennsylvania, where it is called South Mountain.

Streams. — Of the streams of the Appalachian Region the more important are the Potomac, the Youghiogheny, the Castleman, the Savage, Georges Creek, Wills Creek, Sideling Creek, Antietam Creek, and Catoctin Creek. Locate some of these streams on your map. Which flow north? The watershed or divide between the streams flowing into the Youghiogheny and hence by way of the Monongahela, Ohio, and Mississippi to the Gulf of Mexico, and those flowing into the Potomac and hence by way of the Chesapeake into the Atlantic Ocean, passes along the crest of Great Backbone Mountain to about Eagle Rock, a few miles east of Deer Park. It then shifts by way of Altamont, where it is crossed by the Baltimore and Ohio Railroad, to Meadow Mountain, along the summit of which

it continues to and beyond the Pennsylvania line. The Potomac pursues a winding course along the southern border of the whole Appalachian Region, forming numerous picturesque curves and cutting many fine gorges, which are not only beautiful as scenery, but a great boon

FIG. 6.
Gorge at Harpers Ferry. (Md. Geol. Survey.)

to man, as they afford gateways through the mountains for his railroads and canals. Of these gorges the most famous is that at Harpers Ferry, whose scenic beauty is known throughout the country. The Youghiogheny is a rapid and picturesque stream with steep sides and a rocky

FIG. 7.
Swallow Falls on the Youghiogheny, Garrett County. (Md. Geol. Survey.)

bed. Georges Creek is important because it runs through the heart of the coal basin of the same name. It flows into the Potomac at Westernport. Wills Creek, which empties into the Potomac at Cumberland, is an active stream which, in cutting several great gorges across the ridges to the west of Cumberland, especially the one through Wills Mountain, has made a natural pathway through the mountains. The "Narrows," as this gap through Wills Mountain is called, is one of the famous natural scenic features of the region.

Railroads, Canals, and Highways. — The numerous ridges of the Appalachian Region, standing like rocky

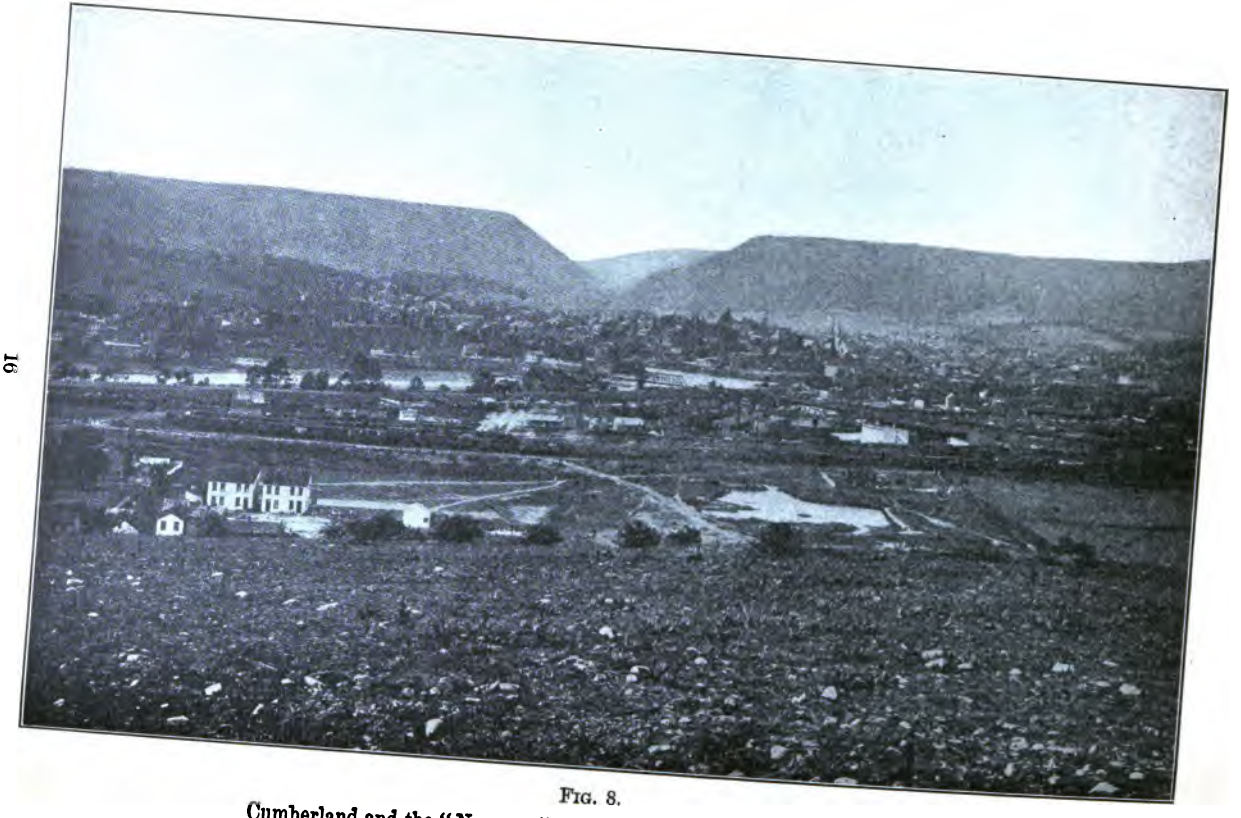

FIG. 8.

Cumberland and the "Narrows" of Wills Mountain. (Md. Geol. Survey.)

walls which ever became higher and higher until the tops of the Alleghanies were reached and passed, greatly delayed the westward progress of the pioneers. This was true in New York, Pennsylvania, and Virginia as well as in Maryland. In Maryland the great natural highway to the West was the valley of the Potomac, and civilized man, following in the footsteps of the Indians, early made use of it in making his way across the mountains. During the French and Indian War military operations caused the building of a good road from Washington, by way of Frederick, Hagerstown, and Hancock, to Cumberland. Between 1806 and 1818 this road was continued as the so-called National Road by way of "the Narrows," Frostburg, and Grantsville and through Pennsylvania to Wheeling. Portions of this old road are still used, as for example the fine driveway out from Cumberland past the old octagon tollhouse near Allegany Grove. Along this road for many years thousands of wagons carried supplies for the settlers in the Ohio Valley, and brought back the flour, pork, and lumber of the hardy pioneers. The steamboat was then introduced on the Mississippi and Ohio and found to be a cheaper means of transportation, and the prosperous days of the old road were soon over. Then came the building of the Chesapeake and Ohio Canal from Cumberland to Washington, and a little later the Baltimore and Ohio Railroad from Cumberland to Washington and Baltimore. Both of these followed the Potomac Valley through the mountains. The canal gave a cheap means of transportation for the coal of the Georges Creek basin, and greatly aided in the development of the whole region around Cumberland. The Baltimore and Ohio Railroad was the first important

railroad built in America. It quickly led to great strides in the development of both the western and eastern parts of Maryland, causing the opening up of new regions and the starting of new industries, and becoming one of the great highways to and from the young and growing West. With the completion by the Western Maryland of its

FIG. 9.
Old National Road and tollhouse. (Md. Geol. Survey.)

connection up the Potomac Valley between Cherry Run and Cumberland, where it will unite with the West Virginia Central and Pittsburg, there will be an additional through line from the West by way of Pittsburg and western Maryland to Baltimore and the East. The city of Cumberland is fortunate as regards transportation facilities. In addition to the roads already mentioned, it

reaches forth into the Georges Creek coal basin by the Georges Creek and Cumberland Railroad and the two branches of the Cumberland and Pennsylvania Railroad, and is connected with Pennsylvania towns by a branch of the Pennsylvania Railroad. The Hagerstown Valley is well supplied with means of transportation, the Western Maryland and the Washington Valley branch of the Baltimore and Ohio giving connections to the east and west, and the Cumberland Valley and the Norfolk and Western giving connections to the north and south.

Industries. — *Mining* is the most profitable industry in the Appalachian Region. Nature has stored in the mountains valuable deposits of coal, fire-clay, "cement rock," limestone, and other minerals, which man is bringing to the surface. The coal beds of this region are the most valuable mineral deposits in the state, yielding an annual product valued at over $5,000,000. The mining of *coal* is the chief industry in Allegany County. It is also a growing industry in Garrett County. In the Georges Creek basin, which lies west of Cumberland and chiefly in Allegany County, the famous "Big Vein" or "Fourteen-foot" seam of coal is found. This is the same seam which made the Pittsburg coal region famous. It has made coal mining in Allegany County very profitable, the coal being a semibituminous or "soft coal," which for use in producing steam, as in locomotives and other engines, has no superior and few equals in any part of the world. These "soft coal" mines are seldom deep down in the earth, as the anthracite or "hard coal" mines of Pennsylvania are, but generally extend as nearly horizontal tunnels right into the sides of the mountains. In the large "Big Vein" mines the tunnels are high enough for a man to walk

upright, and the cars are drawn in and out by mules ; but in many of the small seam mines the miners have to stoop over in walking and as they push the little coal cars into the mines. After the loaded coal cars have left the mines they often run quite a distance by gravity on an inclined

FIG. 10.
Mouth of a coal mine, Allegany County. (Md. Geol. Survey.)

track to what is called the "tipple," where the cars drop their coal directly into the larger railroad coal cars. These take the most of it to Cumberland, where it is reshipped in various directions. In Garrett County there is considerable coal, but the beds or seams are nearly all small, and there are few big mining companies working. An

interesting thing about the coal of Garrett County is that many of the farmers have their own little coal mine, to which they go in the fall, dig out enough coal to last themselves and perhaps a few neighbors throughout the winter, then board up the opening until the next fall.

FIG. 11.

Coal "tipple," Allegany County. (Md. Geol. Survey.)

Among the other mineral industries of importance in the Appalachian Region are the mining of "*cement rock*," *fire-clay*, and *limestone*. The "cement rock" is used in making hydraulic cement; that is, a cement which hardens under water. Thousands of tons of hydraulic cement are used in building bridges, canals, etc. The "cement rock"

FIG. 12.
Cement mine, Cumberland. (Md. Geol. Survey.)

is mined near Hancock, Washington County, and at Cumberland and Pinto, Allegany County. The associated rocks are often folded up into wonderful arches which are silent witnesses of the former tremendous forces which disturbed the rocks of this region. The fire-clay of western Maryland is among the finest in the country. It is mined at Mount Savage, Ellerslie, and Frostburg,

where there are extensive works where the material is made into fire-brick of various shapes for the lining of different kinds of furnaces, its ability to stand great heat being the reason for its name. The limestone floor of the Hagerstown Valley has given occupation to many people there in the quarrying of limestone and burning it into lime. This was formerly quite an important business throughout the valley, quarries and kilns being located at Hagerstown, Cavetown, Antietam, and other places, but the business has been declining for a number of years.

Lumbering stands second among the industries of the Appalachian Region, and is the chief industry carried on in Garrett County. It is also a subordinate occupation among the Alleghany ridges and in the Blue Ridge region. In these districts the ruggedness of the country makes farming difficult, while the great forests of valuable timber yield rich returns to the energetic lumbermen. Have you ever seen the lumbermen at work? A man goes through the woods and "blazes" or marks with an axe the trees which are to be cut, then a gang of men come along, chop down the trees, trim off the branches, peel off the bark for the tanners, and saw up the mighty trunks into even lengths. The next thing is to get the logs to the sawmill, which is done in different ways, depending chiefly on the season and the character of the country. Sometimes they are floated down streams, sometimes hauled in on great sleds, sometimes pulled along by horses in rough, greased troughs called "skids," which are just wide enough to take one log at a time, to some steep cliff, and "shot over" into the valley below. It is an exciting scene when the great logs go chasing each other down the steep hillside. Below, they are loaded on cars and hauled

to the mills on private railroads. At the mill the logs are sawn into lumber, which is shipped to the nearest good

FIG. 13.

Savage River, Garrett County, showing forested region. (Md. Geol. Survey.)

market. The trimmings are frequently used by other special mills near by for making kindling-wood, broom-handles, clothes-pins, etc. In Garrett County the beds of

the streams are so rocky they cannot be used to float the lumber down, so here the lumberman has to build his own railroad. The trees of this region which are of most value to the lumberman are white pine, hemlock, white oak, chestnut, beech, birch, and maple. Most of the white

FIG. 14.
Lumber mill on Castleman River, Garrett County.

pine and white oak has been cut down. Considerable spruce and so-called "poplar" or tulip tree is cut for the wood-pulp mills, where it is made into paper. Thousands of tons of wood-pulp paper are used every week by the great daily newspapers of the country.

Agriculture, which is the chief industry in the eastern portions of Maryland, is of relatively less importance in the Appalachian Region. To this there is one notable exception, for farming is the chief occupation of the peo-

FIG. 15.
Farm in typical narrow valley, Allegany County.

ple in the Hagerstown Valley. The floor of this valley is formed of great beds of limestone, which gives rise to one of the richest of soils. Therefore we find that the valley constitutes a great broad band twenty miles in width of the most fertile lands in the state. There are many excellent farms, and large crops of wheat, corn, and hay are raised annually, while many cattle are fattened on its grassy hillsides. Throughout the rest of the Appalachian Region, with a few more exceptions which will be

mentioned later, the mountainous character of the surface is unfavorable to agriculture. The soils of the mountain ridges are thin and stony and difficult to cultivate. The valleys are usually narrow, with steep walls, and the farms can rarely be very extensive or the production very large. There are a few spots especially favored by nature where good crops are obtained, such as the bottom-lands along the Potomac and other large streams, and the "glades" on the high plateau in Garrett County. The "glades" yield considerable oats and hay, and also have been found to be fine lands for the growing of *flowers*, celery, cauliflower, and other dainty produce. An important reason for success of certain farms with these latter products is that their shipping facilities are so good that cut roses, carnations, and chrysanthemums can leave at midnight and be in Baltimore, Philadelphia, and New York the next forenoon. Many of the farmers in Garrett County have fine groves of sugar maple trees, which are regularly tapped each spring and the sap boiled down into fine *maple sugar*.

FIG. 16.
Sugar maple grove, Garrett County.

About two hundred and fifty thousand pounds of maple sugar are sent to the markets every year, a fact which will probably surprise many Maryland boys and girls who suppose that all the maple sugar comes from Vermont. It has been discovered that a narrow belt along the higher western slope of the Blue Ridge is well adapted to the growing of fine *peaches*. This discovery has resulted in a profitable

FIG. 17.
Mountain peach orchard in the Blue Ridge.

industry at Pen Mar, Edgemont, and elsewhere, which is greatly aided by the fact that peaches shipped in the evening can be sold in the eastern cities the next morning. The most favorable situation for these mountain peach orchards is said to be high on the mountain side, facing the north, where the buds are late starting in the spring and therefore are safe from damage by frost.

Manufacturing is an important industry at a few towns, but throughout most of the Appalachian Region is of sub-

ordinate importance. Cumberland is the principal manufacturing centre, which is chiefly due to the fact that it has fine shipping facilities and is especially favored in having cheap coal and in being easily reached and supplied with the raw materials for numerous manufactures, especially those of iron, lumber, and glass. The abundant water-power of the Hagerstown Valley district, together with its good shipping facilities and nearness to Baltimore and other sources of supply, has resulted in the establishment at Hagerstown of quite a variety of important manufactures, notably those of gloves, knitted goods, and furniture.

Mountain resorts have been established at numerous points on the Alleghany Plateau, among the Alleghany ridges, and in the Blue Ridge district, to which thousands of visitors flock every summer, attracted by the beautiful scenery, and opportunities for rest, recreation, and restoration to health. The providing for the wants of these visitors gives occupation to many of the people in this region. Among the most famous of these resorts are Deer Park and Mountain Lake Park on the plateau in Garrett County, twenty-five hundred feet above the sea, and Pen Mar on the Pennsylvania and Maryland boundary line near Mount Quirauk, the highest point of the Blue Ridge.

Cities and Towns. — The towns of the Appalachian Region are as a rule not very large, there being only five having over two thousand people. This is of course a direct result of the mountainous and thickly wooded character of the larger part of the region.

CUMBERLAND, the largest city in the district, is also the second largest city in the state. It had a population of 17,128 in 1900. The favorable situation of Cumber-

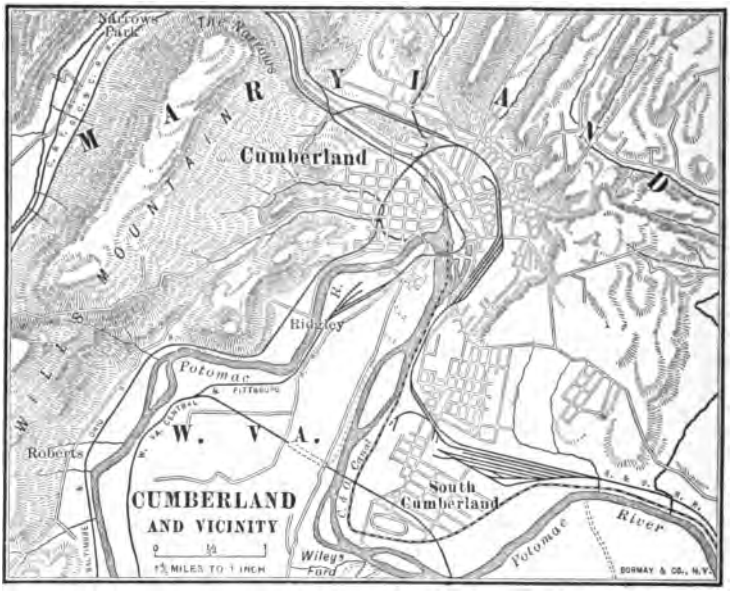

FIG. 18.

land has been the chief reason for its growth and prosperity. It is located on the head waters of the Potomac, where the river changes the general direction of its course and so ceases to afford a direct path toward the great Northwest. At the same point Wills Creek empties into the Potomac, having just cut its great gap through Wills Mountain. Cumberland stands facing this gap, the gateway to the West (see Fig. 8, page 16), and is the natural receiving and distributing point for the great coal basin of Georges Creek and the rich lumber, oil, and coal regions of West Virginia. To these natural advantages are to be added the excellent shipping facilities afforded

by no less than seven railroads and the Chesapeake and Ohio Canal. With such advantages it is not surprising that Cumberland has grown to be the second manufacturing city in the state. There are large mills, foundries, and machine shops for the manufacture of iron and steel products ; planing mills, sash and blind factories, lumber yards, tanneries, a coffin factory, and a wood-pulp paper mill making use of the lumber of western Maryland and northern West Virginia ; glass factories using the white sandstone of the vicinity to make fine glassware and glass bottles ; cement works, brick-yards, flour mills, etc.

HAGERSTOWN is the third city in size in the state, having a population of 13,591 in 1900. The city has a fine location in the centre of the Hagerstown Valley at an elevation of about 600 feet. To the north and south extends a stretch of more than 60 miles of thickly settled, abundantly watered, highly cultivated farm lands. It has excellent transportation facilities and is the natural shipping point to and from this rich farming region. It is also one of the most important manufacturing cities in the state, having over one hundred mills of various kinds at work, in which are made gloves, bicycles, silk goods, knitted goods, shirts, organs, bricks, furniture,—especially extension tables, — wheel and carriage stock, paper, confectionery, and numerous other articles.

FROSTBURG, with a population of 5274 in 1900, is situated high up on the eastern slope of Big Savage Mountain, near the head waters of Georges Creek. It is the principal town of the Georges Creek coal basin, to the existence of which it owes its prosperity.

BRUNSWICK, which is situated on the Baltimore and Ohio Railroad between Point of Rocks and Weverton, is

a bustling town of 2471 people. It is the largest town in the Blue Ridge region of Maryland, and owes its importance to being the location of shops, roundhouse, and other buildings of the Baltimore and Ohio Railroad.

LONACONING, whose population was 2181 in 1900, and WESTERNPORT, with a population of 1998, are two other

FIG. 19.
Old iron furnace at Lonaconing. (Md. Geol. Survey.)

towns situated in the Georges Creek coal basin, whose activities centre in the coal industry. At Lonaconing there stand the ruins of an old iron furnace, which is a relic of the days prior to 1850, when the production of iron was an important industry of this region. The discovery of the Lake Superior iron ores has made it, at least for the present, unprofitable to work the low-grade ores of western Maryland.

OAKLAND is the county seat and largest town in Garrett County, although its population in 1900 was only 1170.

Its situation on the high level ground in the central part of the county gives it a fine climate and attracts many visitors in the summer time. It is the natural shipping point for the larger part of the products of the county.

REVIEW QUESTIONS ON THE APPALACHIAN REGION. — *Surface Features.* — Define the limits of the Appalachian Region. What counties does it include? Describe briefly the character of the surface in this region. Of what are the even sky lines and uniform heights of the ridges suggestive? How were the present ridges and valleys formed? Locate the Alleghany Plateau and describe its surface features. Name some of the ridges which rise above it. What are the "glades"? Describe the region of the Alleghany ridges. Name some of the ridges. Describe the surface of the Hagerstown Valley. Of what larger valley is it a part? What two mountain ridges lie east of the Hagerstown Valley? Describe the Blue Ridge.

Streams. — Name and locate some of the important streams of the Appalachian Region. Locate as well as you can the divide between the streams flowing into the Youghiogheny and those flowing into the Potomac. Follow on your map the courses pursued by the water falling on the two sides of this divide. State a few facts about the Potomac; the Youghiogheny; Georges Creek; Wills Creek. What and where is the "Narrows"?

Railroads, Canals, and Highways. — How did the natural features hamper the progress of the pioneers in Maryland? What was Maryland's natural pathway to the West? State the chief facts about the old road from Washington to Wheeling. What important results followed the building of the Chesapeake and Ohio Canal and the Baltimore and Ohio Railroad? What natural features greatly aided in their construction? Trace on the map as far as you can the new through line to western Maryland and Pittsburg. Trace routes by which goods shipped to Cumberland can be distributed to the near-by towns; goods shipped to Hagerstown. Trace as far as you can the routes by which the coal of the Georges Creek basin reaches the markets; the lumber of Garrett County; the wheat of the Hagerstown Valley.

Industries. — Name the most profitable industry in the Appalachian Region. In which county is mining the chief industry? Name the

most valuable mineral product. State some important facts about the coal mines in the Georges Creek coal basin; those of Garrett County. What minerals besides coal are mined in the Appalachian Region? Locate some of the "cement rock" mines; the fire-clay mines; the limestone quarries. What is the second chief industry of the Appalachian Region? In what county is it the chief industry? Describe the methods of the lumbermen. Name some of the valuable trees. What uses are made of the lumber? Why is agriculture of subordinate importance in the Appalachian Region? What kind of a farming region is the Hagerstown Valley? What special crops are grown in the "glades"? State some facts about the maple sugar industry of Maryland. Why is the growing of peaches successful in the Blue Ridge district? How does manufacturing rank as an industry in the Appalachian Region? What conditions have made Cumberland and Hagerstown important manufacturing centres? What special occupation does the scenery, fine air, etc., of the mountainous Appalachian Region afford many of the people? Name and locate some important mountain resorts.

Cities and Towns. — Why are the towns of the Appalachian Region usually small? Name six important towns in this region. Which is the largest? Locate and state some important facts about Cumberland, Hagerstown, Frostburg, Brunswick, Lonaconing, Oakland.

SECTION III

THE PIEDMONT PLATEAU OR NORTHERN CENTRAL MARYLAND

Surface Features. — The territory lying between the Appalachian Region and the Coastal Plain is called the Piedmont Plateau. It is a part of the larger plateau of the same name which extends north and south of the state. Its western boundary line is the eastern slope of Catoctin Mountain, its eastern an irregular line running from Elkton by way of Baltimore and Laurel to Washington. This line marks its separation from the Coastal Plain. It is known as the "*fall line*" because of the fact that falls or rapids occur in most of the streams where they pass over the last ledges of the hard Piedmont rocks on to the soft materials such as sands, gravels, and clays forming the Coastal Plain. The Piedmont Plateau includes about one-fourth of the land area of the state, comprising all or the greater part of Montgomery, Howard, Baltimore, Harford, Carroll, and Frederick counties and parts of Cecil and Prince George's. The Piedmont Plateau is composed of low, undulating hills which give the surface a broken, hilly character. The hills gradually become higher as we pass from the eastern margin, where they rarely exceed four hundred feet, until they reach their highest altitude near the central part of the region in a ridge about eight hundred feet high, known as Parrs Ridge, from which the surface then slopes gradually to

the Monocacy River. The rocks underlying the Piedmont Plateau are very ancient and very hard. Through the harder of these rocks the streams have cut deep, narrow gorges, while in the softer ones they have carved out broad, flat, fertile valleys.

FIG. 20.
Typical Piedmont scenery, Harford County. (Md. Geol. Survey.)

Streams. — The chief streams in the Piedmont Plateau of Maryland are the Monocacy, Patuxent, Patapsco, Gunpowder, and Susquehanna. The Susquehanna is the largest, but we have only its broad, lower end in Maryland. The Monocacy is the broad stream crossed by the Baltimore and Ohio Railroad east of Washington Junction. The Patapsco is a broad estuary from Chesapeake Bay to Baltimore, affording a fine harbor; but, like most of the streams along the "fall line," narrows quickly as it leaves the Coastal Plain to cross the Piedmont Plateau.

Seneca Creek in Montgomery County and Rock Creek and Anacostia Creek near Washington are streams of minor importance. The divide between the streams which flow into the Potomac and those which flow directly into the Chesapeake passes along Parrs Ridge from Manchester to Mount Airy, then past Sandy Spring, Laurel, and Bowie, thence down the main peninsula of southern Maryland to Point Lookout. Which of the Piedmont streams mentioned flow into the Potomac? Which directly into Chesapeake Bay?

Railroads, Canals, and Highways. — The Piedmont Plateau region, because of its comparatively level surface and its being the oldest and wealthiest portion of the state, is very well supplied with transportation facilities. Numerous good wagon roads connect the towns and villages throughout the region, being easily and cheaply constructed because of the comparatively level character of the surface and the abundance of good road-making materials. The Philadelphia, Wilmington, and Baltimore Railroad — a part of the Pennsylvania System — and the Baltimore and Ohio Railroad pass along near its eastern edge and give it direct and quick connection with Philadelphia, New York, and New England in one direction and with Washington and the South in the other. The Pennsylvania by branch roads running south through Delaware also connects with the whole Eastern Shore. Boat lines running in connection with the Queen Anne's Railroad and the Baltimore, Chesapeake, and Atlantic Railroad connect the southern portion more directly with the Eastern Shore. There is a direct line from Baltimore to Annapolis as well as connecting lines by way of the Baltimore and Ohio and the Pennsylvania. The Pope's Creek branch

of the Pennsylvania road gives a direct connection with southern Maryland. The Baltimore and Ohio, Chesapeake and Ohio Canal, and Western Maryland also give direct connection with western Maryland and the West. The Northern Central and the Maryland and Pennsylvania lead directly north through the district. Many boat and steamship lines connect Baltimore with other places on the Chesapeake Bay, on the Atlantic coast, and points abroad.

Industries. — *Manufacturing* is the most important industry in the Piedmont Plateau, especially in the eastern portion. Numerous waterfalls occur along the "fall line," and these supply an immense amount of water-power, thus providing many very favorable sites for mills of all sorts. Because of this fact the eastern Piedmont region has come to be the most important manufacturing region in this state, as it has of the states to the north and south. Each section early came to be supplied with its flour mills, and in due time cotton mills were built at many points. Most of the flour mills have passed away, however, only a few of the most favorably situated ones having been able to maintain themselves against western competition. The cotton mills have held out longer and are still successful, because it is only recently that the South has begun to spin and weave its cotton at home. Baltimore, the foremost manufacturing city in the state, is one of the favorably located cities on the "fall line." Other cities on or near the "fall line" are Elkton, Havre de Grace, Ellicott City, and Laurel. The various kinds of manufacturing carried on in this district will be mentioned in connection with the different cities.

Agriculture as an industry in the Piedmont Plateau region is almost as important as manufacturing. In fact,

outside of the large towns and away from the "fall line" it is the chief industry of the people. The Piedmont region has long been recognized as one of the most flourishing farming regions in the state. The rolling character of the surface is much like that of Hagerstown Valley, and there are also a number of valleys which, like the Hagers-

FIG. 21.
Lexington Market, Baltimore.

town Valley, have a limestone floor with the resulting rich limestone soils so highly thought of by the farmer. The rocks which underlie the Piedmont Plateau vary considerably in character, giving rise to quite a variety of soils; but nearly all appear to be good and well adapted to the most profitable crops. Large crops of hay, wheat, corn, oats, and potatoes are raised on the many fine farms throughout the region. Tomatoes and sugar corn are grown in large

quantities for the canneries. The lands are good grazing lands, and large numbers of cattle are fattened here every year. The *dairy industry* is also an important one in this region, for its nearness to Baltimore and Washington enables it to control nearly the whole business of furnishing milk to these large cities. *Market gardening*, or the growing of small fruits and vegetables for the city markets, is also a profitable business near Baltimore and Washington.

The *mineral industries* of the Piedmont Plateau, although not so important relatively as manufacturing and agriculture, and not so important as those of the Appalachian Region, are, however, quite profitable. There are no great beds of coal, "cement rock," or fire-clay, as in western Maryland; but instead there are large quantities of fine building stone, limestone, and pottery materials, and smaller deposits of chrome ore, copper ore, mineral paints, and soapstone. The *building stone industry* is the most important. Large *granite* quarries are located at Port

FIG. 22.
Granite quarry, Port Deposit. (Md. Geol. Survey.)

FIG. 23.

Marble quarry, Cockeysville, Baltimore County. (Md. Geol. Survey.)

Deposit, Woodstock, Ellicott City, and elsewhere. Maryland granite has been used in the construction of many important buildings, including the Capitol and the Congressional Library in Washington, and the United States Naval Academy at Annapolis. Some fine *white marble* is quarried at Cockeysville and Texas in Baltimore County. Some of the best *slate* in the famous Peach Bottom slate belt of Pennsylvania and Maryland is found in Harford County, Maryland. The beautiful *red sandstone* quarried near the mouth of Seneca Creek, Maryland, was used in the construction of the Smithsonian Institution in Washington and many other important buildings. One of the most interesting and most beautiful decorative stones in Maryland is the *serpentine* found in Harford, Baltimore, and Cecil counties. This is a hard rock with a rich

emerald-green color clouded with darker streaks. It has been used considerably for interior decoration. The *limestone industry* has been carried on for a long time in the Piedmont Plateau. The limestone is burned to make lime for various uses. The chief centres of the industry are in Baltimore and Frederick counties. Mining for *pottery*

FIG. 24.
Limekiln, Liberty, Frederick County.

materials, which include kaolin, flint, and feldspar, is an active industry in certain parts of the Piedmont Region. The kaolin is mined chiefly at North East, Cecil County; the flint chiefly in Harford County; and the feldspar in Cecil, Baltimore, and Howard counties. *Copper ores* were mined early in colonial times and were among the important mineral products of Maryland until the discovery of the great copper mines of Michigan. Most of the Maryland mines are now abandoned. *Chrome ore*, used in the manufacture of paints and of chrome steel, occurs

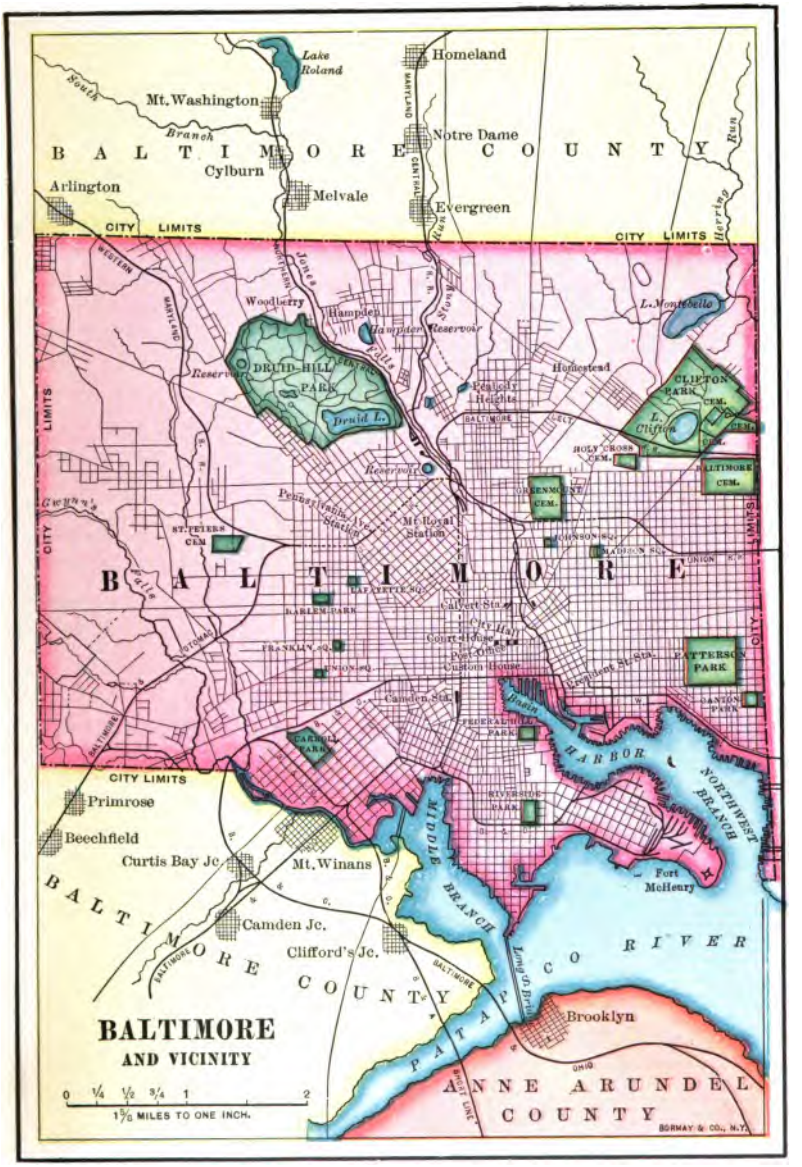
Lake Roland
Homeland
South Branch
Mt. Washington
Notre Dame
BALTIMORE COUNTY
Cylburn
Arlington
Melvale
Evergreen
CITY LIMITS
CITY LIMITS
Woodberry
Hampden
Hampden Reservoir
L. Montebello
DRUID HILL PARK
Druid L.
Reservoir
Homestead
Peabody Heights
CLIFTON PARK
L. Clifton
HOLY CROSS CEM.
BALTIMORE CEM.
GREENMOUNT CEM.
Mt. Royal Station
Pennsylvania Station
ST. PETERS CEM.
BALTIMORE
Lafayette Sq.
Harlem Park
Calvert Sta.
City Hall
Court House
Post Office
Custom House
Franklin Sq.
Union Sq.
Washington Sq.
Madison Sq.
Union Sq.
PATTERSON PARK
Camden Sta.
Camden Yards
Federal Hill Park
Riverside Park
HARBOR
NORTHWEST BRANCH
Fort McHenry
MIDDLE BRANCH
RIVER
Primrose
Beechfield
Curtis Bay Jc.
Mt. Winans
Camden Jc.
Clifford's Jc.
BALTIMORE COUNTY
Brooklyn
ANNE ARUNDEL COUNTY
BALTIMORE
AND VICINITY
0 1/4 1/2 3/4 1 2
1 7/8 MILES TO ONE INCH.
BORMAY & CO., N.Y.

FIG. 26. — Panorama of Baltimore

in Baltimore, Harford, and Cecil counties. Maryland was for years the chief source of the world's supply of this rare ore; but in 1848 great deposits were discovered in Asia Minor, and the Maryland mines were abandoned. Strange to say, the chrome works at Baltimore are still in operation, although they find it cheaper to send to far-away Asia Minor for their ore. *Soapstone* has been quarried in Carroll, Harford, and Montgomery counties.

Cities and Towns. — BALTIMORE is the chief city in Maryland and the sixth in size of the country. The population in 1900 was 508,957. The *favorable location* of Baltimore has been the chief cause of its growth. It is situated at the "fall line" on the Patapsco River, which is navigable for large vessels to the city's wharves, about 13 miles from Chesapeake Bay and 170 miles from the Atlantic Ocean. It is closer by several hundred miles than New York or Boston to the great cotton belt of the South, to the grain-growing sections of the West, and to the lumber, coal, and iron wealth of the Appalachian Region, thus giving it cheap and easy access to the supplies required for industries of every kind, and attracting commerce by providing unusually

and the Upper Harbor.

favorable shipping facilities for the regions mentioned. Quite a number of railroads pass through it, while numerous lines of steamboats have developed an important coastwise and foreign trade. All of these favorable features

FIG. 27.

Repairing a ship in a large dry dock, Baltimore.

have resulted in a rapid growth in population, in the establishment of a large number of important manufacturing industries, and in making Baltimore a great distributing centre. The *manufactures* of Baltimore include almost every important industry. The city is the largest

FIG. 28.
Eutaw Place, Baltimore.

centre in the United States for the manufacture of ready-made clothing, shirts and overalls, straw hats, cotton duck, and fertilizers; also first in the business of canning fruits and vegetables. It is one of the largest in the making of smoking tobacco and cigars, drugs and medicines, marble and stone, lumber and furniture, brick and tile, ships, floating docks, bridges, gas plants, and other great

iron and steel structures. For years most of the copper of the great mines in Montana and Arizona has been shipped to Baltimore, refined at the great copper works here, and the pure copper shipped to all parts of the world. Baltimore has many handsome *buildings* and quite

FIG. 29.

Mount Vernon Place, Peabody Institute, and Washington Monument, Baltimore.

a number of beautiful parks and streets. Druid Hill Park is a large park famed throughout the East for its natural scenic beauty. Eutaw Place and Mount Vernon Place are among the most beautiful streets. In view of the many handsome monuments scattered throughout the city, it

FIG. 30.
City hall, Baltimore (post-office in the background).

is well named the "Monumental City." Of these the largest is the Washington Monument, the first public monument erected to George Washington. The court-house, post-office, and city hall form a cluster of handsome public buildings in the heart of the business section. The famous Johns Hopkins Hospital has a group of beautiful, well-equipped buildings which have no superior for their purpose in the country. Other fine buildings are the

FIG. 31.
Johns Hopkins Hospital, Baltimore.

Peabody Institute, the Woman's College, the First Presbyterian Church, the Roman Catholic Cathedral, Mount Vernon Place Methodist Church, Eutaw Place Baptist Church, and numerous handsome office buildings, banks, hotels, etc.

FIG. 32.
The Cathedral, Baltimore.

FREDERICK, the second city in size in the Piedmont Plateau, is also the fourth city in the state, having a population of 9296. It is finely situated in the beautiful valley of the Monocacy, and is interesting historically as the place where Washington and Braddock fitted out their famous expedition against the Indians in the French and

FIG. 33. — Group of office buildings, Baltimore.

Indian War. Frederick carries on quite a number of manufactures, including knitted goods, fibre brushes, wagon spokes, and straw hats.

HAVRE DE GRACE is a thriving town of 3423 people. It is favorably situated at the mouth of the Susquehanna and on both the Pennsylvania and Baltimore and Ohio railroads. General Lafayette is said to have remarked that its location resembled that of the French port, hence its name. It supports quite a variety of manufactures as well as important fishing interests.

WESTMINSTER, the county seat of Carroll County, had a population of 3199 in 1900. Like Frederick, it is the centre of an important agricultural district. Some fine marble is quarried in the vicinity. The Western Maryland College is located here.

ELKTON, the county seat of Cecil County, has a population of 2542. It is located on the Elk River and on the Pennsylvania Railroad, about halfway between Philadelphia and Baltimore. It is in the midst of a fertile agricultural region and also has a variety of manufacturing industries.

WASHINGTON, being in the District of Columbia, is politically outside of Maryland, but geographically it lies within the limits of the state, the sixty-five square miles of land at present constituting the District having been given by Maryland to the national government. Washington has about the same physical features and natural resources as the Maryland cities situated near the "fall line." It is well provided with means of transportation, being directly connected by rail with the East, the West, and the South. It is naturally well situated for a commercial and manufacturing centre, being convenient to the immense water-

power stored in the Great Falls of the Potomac, and at the head of navigation on the wide and beautiful Potomac River; but in spite of these advantages Washington has never become important along such lines, having been completely eclipsed by Baltimore. Washington is the fifteenth in size of the larger cities of the country, its population being 278,718 in 1900. It is chiefly important as the seat of the national government. The President of the United States lives here, his beautiful home being called "The White House." Each state sends here its representatives and senators, who meet in the magnificent Capitol building and pass laws for the government of the nation. Washington is the most beautiful city in the country. This is in part due to the presence of the Capitol, White House, Library of Congress, Washington Monument, and other great public buildings; and also to the numerous monuments, the wide and well-paved streets, and the many beautiful parks.

REVIEW QUESTIONS ON THE PIEDMONT PLATEAU. — *Surface Features.* — Define the limits of the Piedmont Plateau. What is the "fall line"? What counties are included? Describe the surface. State the kind of rocks forming the Piedmont Plateau and the different effects they have caused the streams to produce.

Streams. — Name and locate the chief streams in the Piedmont Plateau. Which is the largest? Which flow into the Potomac? Chesapeake Bay? Trace on the map the divide between the two groups of streams.

Railroads, Canals, and Highways. — Why is road-making easy in this region? Trace the routes which goods would take in going from Baltimore to Elkton; to Washington; to the southern part of the Eastern Shore by rail and by boat; to Annapolis; to St. Mary's County; to Hagerstown; to Cumberland.

Industries. — Name the most important industry in the Piedmont Plateau. Where is most of the manufacturing carried on? Name

and locate some cities on or near the "fall line." How does agriculture rank as an industry in this region? Name some of the crops grown. Why are the dairy business and market gardening profitable industries in this region? What are the important mineral industries in the Piedmont Plateau? Locate some of the building-stone quarries.

Cities and Towns. — Name six important cities and towns in the Piedmont Plateau. How does Baltimore rank in the region and state? What are the chief reasons for the growth and prosperity of Baltimore? Name some of its manufactures. In which does it rank first in the country? Name some important buildings in Baltimore. State a few important facts about Frederick; Havre de Grace; Westminster; Elkton. What relation does Washington, D.C., bear to Maryland? For what two things is Washington noted? How would you travel from where your school is located to the nearest large town? to Baltimore? to Washington? to Frederick? to Cumberland?

SECTION IV

THE COASTAL PLAIN OR SOUTHEASTERN MARYLAND

Surface Features. — The Coastal Plain or Southeastern Maryland comprises all that region extending from the "fall line" eastward to Delaware and the Atlantic Ocean,

FIG. 34.
Typical Coastal Plain scenery, Kent County. (Md. Geol. Survey.)

and southward to the mouths of the Potomac and Pocomoke rivers. It is considerably the largest of the three great natural divisions, comprising over half of the land area of the state. The surface of the Coastal Plain is strikingly different from both the Appalachian Region and

the Piedmont Plateau. It is a broad, low, nearly level plain inclined slightly toward the ocean. Along its western edge it sometimes attains an altitude of three hundred feet or more, from which elevation it gradually decreases until in its southeastern portion it is only a few feet above the sea. It is crossed by many tide-washed bays and estuaries, which make the Maryland coast-line one of the longest

FIG. 35.
Calvert Cliffs on Chesapeake Bay, Calvert County. (Md. Geol. Survey.)

in the country. Chesapeake Bay is the most striking of these bodies of water. It has an area of 1203 square miles, and extends almost across the state from the south to the north, dividing the Coastal Plain region into two quite distinct portions, a lower eastern division and a more elevated western division. These divisions are commonly known as the Eastern Shore and the Western Shore, although these terms apply also to the corresponding portions of Virginia. The portion of the Western Shore south of Baltimore is known as Southern Maryland.

Streams. — The whole Coastal Plain region has in the past slowly sunk to such a point that the ocean flowed into the lower end of the Susquehanna River, which used

to extend to Cape Henry, and thus formed Chesapeake Bay. The streams now flowing into the Chesapeake were formerly branches of the Susquehanna, but their lower ends have been "drowned" in the same way as the Susquehanna, thus forming the wide estuaries which exist for short distances up from their mouths. Name some of the important streams on the Western Shore; the Eastern Shore. On the Atlantic Coast side of the Eastern Shore there are no streams of importance, but there are several long, shallow bays separated from the Atlantic Ocean by long, narrow sand-bars. Name the largest of these.

Railroads, Boat Lines, and Highways. — The Coastal Plain region is well supplied with transportation facilities. Many lines of boats run between the small towns located on all the rivers, and even find their way to the interior of hundreds of farms. In addition to the boat lines, the railroads have made a network on the Eastern Shore, the chief ones being the Philadelphia, Wilmington, and Baltimore, Queen Anne's, and the Baltimore, Chesapeake, and Atlantic. The northern part of the Western Shore is traversed by the Pennsylvania and Baltimore and Ohio roads, and is therefore well taken care of. Southern Maryland has three roads to Annapolis, and one from Bowie southward through the main peninsula almost to Point Lookout. The flatness of the Coastal Plain surface has rendered the making of good highways comparatively easy, although this is sometimes offset by a lack of good road-making materials. On the whole, however, the Coastal Plain is well provided with excellent wagon roads.

Industries. — *Agriculture* is the chief occupation of the people throughout the Coastal Plain. In this connection

there are two quite well-defined districts to be recognized, the Eastern Shore and the southern Western Shore, or Southern Maryland. *The Eastern Shore* of Maryland is one of the finest farming sections in the United States for small fruits and vegetables. Tomatoes and corn are raised in large quantities and canned in the vicinity. Nearly every town has one or more canneries. The extensive

FIG. 36.
Strawberry field on the Eastern Shore.

and highly successful peach and pear orchards of the Eastern Shore are famous. Large nurseries for growing young fruit trees to sell also constitute a most profitable pursuit at certain places. The most noted of these are the nurseries at Berlin, Worcester County, which cover over one thousand acres. Large crops of corn and wheat are also obtained on the Eastern Shore, especially in the northern counties. *Southern Maryland* includes the coun-

ties south of Baltimore and Washington. In Anne Arundel and Prince George's counties the conditions are very similar to those on the Eastern Shore. Large quantities of tomatoes and corn are grown and canned here also. Proximity to Baltimore and Washington makes truck farming, or the raising of small fruits and vegetables, very

FIG. 37.
Young apple trees at the Berlin nurseries.

profitable. In Anne Arundel County are hundreds of acres of watermelon and canteloupe patches, and strawberry, raspberry, and blackberry fields. Every summer hundreds of families of Bohemians and negroes move from the city to this region to serve as "pickers." They camp out during the summer and return to the city in the fall. Considerable corn and wheat is grown throughout Southern Maryland, especially in the central portion. In

the southern counties the great crop is *tobacco*, large quantities of which are grown every year. This has always been so since the earliest colonial times. It is very interesting to follow the various steps in the growing, curing,

FIG. 38.
Tobacco field in Southern Maryland.

and shipping of tobacco. The seed is sown in hotbeds; from which the young plants are removed later and planted in the fields. When the plants are nearly grown, they are "topped," or have the flower stalk cut off so as to make the leaves grow larger. The leaves when grown are often two feet long and nearly a foot wide. The whole plant is cut down, and quite a number are strung on a rod which is passed through a hole in the stem. The rods are then hung in great barns, which are kept nearly closed most of the time until the following season, so that the tobacco can "cure" or partially dry very gradually. When cured

the leaves are stripped from the stalk, packed in large casks at first by foot pressure, and then the contents of two or three casks are pressed into one by removing false bottoms and using great screw presses. The casks when ready to be shipped to the warehouses weigh about seven hundred pounds. In colonial times so many of the farmers of Maryland grew tobacco, it was used like money for purposes of trade. The *oyster industry*, *crab industry*, and *fisheries* stand next to agriculture in importance among the industries of the Coastal Plain region. Five million

FIG. 39.
Oyster fleet in the Lower Harbor, Baltimore.

bushels of *oysters*, having a value of $3,500,000, are obtained every year. These supply local demands, and the immense surplus is canned and shipped to almost every inland town in the country. Maryland ranks first in the country in the oyster-canning business. Great oyster canneries are located at Baltimore, Crisfield, St. Michaels, Oxford, and Annapolis. A fleet of nearly five thousand boats is engaged in the oyster business. The oysters live attached to stones, wooden objects, and old oyster shells, in great "beds" in the shallow waters along the

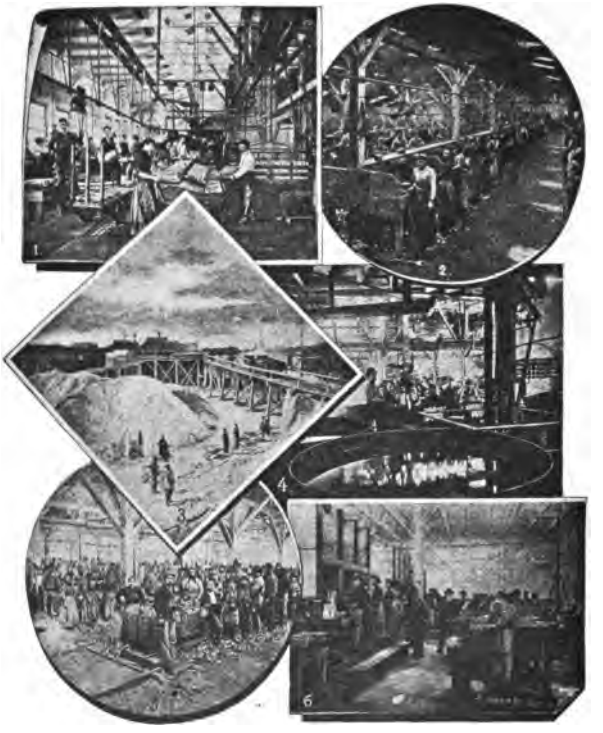

FIG. 40.

The oyster industry.

1. Packing oysters.
2. Raw shucking.
3. Burning oyster shells to make lime.
4. Cooking oysters.
5. Steamed-oyster shuckers.
6. Weighing and canning.

shores of the Chesapeake and its tributaries. The oystermen catch them either with "tongs," which look like a pair of rakes fastened together, or with "dredges," which are scoop-like affairs that are dragged along the bottom at the ends of long ropes fastened to the sides of

the dredging boats. Of the *fish* the most important is the shad. It is estimated that 2,250,000 or more shad are secured from Maryland waters each year. Every year the United States Fish Commission empties into the Chesapeake Bay and its tributaries from 65,000,000 to 75,000,000 young shad to support the shad fisheries of the state. There is a small fish called the menhaden, which is extremely abundant on the Atlantic coast. It is not good to eat, but a valuable oil is extracted from its body by pressure and the solid part remaining is used in the manufacture of fertilizers. In a single favorable year 92,000,000 pounds of these little fish have been caught in Chesapeake Bay, the value of which was about $300,000. More than eighty per cent of the Atlantic coast catch of the highly prized Spanish mackerel is made in Chesapeake Bay. About 100,000,000 pounds of herring are also taken, and large quantities of bay trout, bluefish, white perch, and rock, together with smaller quantities of less important fish, are obtained. The *crabs* also support an immense industry. Crabs are so numerous that the competition for food causes them to be always hungry and ready to seize any sort of animal food. It is said that a single crabber sometimes catches 2000 between sunrise and ten in the morning. The total catch is estimated to be about 750,000 bushels of hard-shell crabs and 700,000 dozen soft-shell crabs. The local markets are fully supplied, and then the surplus of hard-shell crabs is picked and the crab meat canned in the canneries at Oxford, Cambridge, Crisfield, and elsewhere.

The *mineral industries* of the Coastal Plain, though quite profitable, are of less importance than those of the Appalachian Region or the Piedmont Plateau. They differ

also in the character of the materials mined. The most valuable *clays* in the state occur in a band which runs along the western margin of the Coastal Plain east of the "fall line." These clay deposits support numerous brick-yards, tile, terra-cotta and sewer-pipe works, potteries, etc., some of which are within the Coastal Plain and others in the cities along its margin. Some clays are also found

FIG. 41.
Terra-cotta works at Baltimore. (Md. Geol. Survey.)

on the Eastern Shore, which are made into bricks for local use. A valuable deposit of the finest quality of *glass sand* has been mined with profit on the Severn River in Anne Arundel County. Considerable "*silica*," or *diatomaceous earth*, is found in Calvert and Charles counties. It is mined at several places and used as a polishing powder, and in making dynamite. Considerable *bog iron ore* is found in some of the clay beds already referred to, most of which is smelted at the furnace at

FIG. 42.
Turning jars in a Baltimore pottery.

Muirkirk, and made into a valuable variety of iron used by the United States government in the manufacture of

armor-piercing projectiles. *Manufacturing* is of subordinate importance in the Coastal Plain region. Nevertheless, there are numerous manufactures carried on which will be mentioned in connection with the various cities and towns.

Cities and Towns. — ANNAPOLIS, the capital of the state,

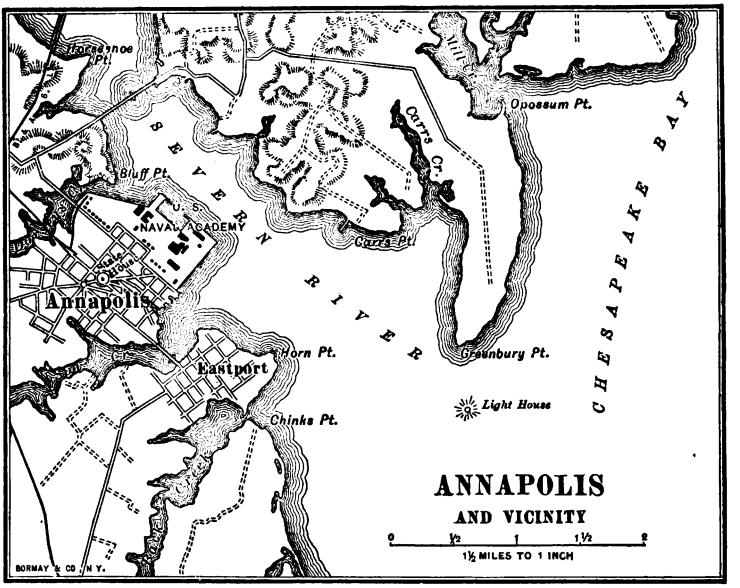

FIG. 43.
Map of Annapolis.

is the fifth city in size, its population in 1900 being 8402. It was settled in 1649, and is therefore one of the oldest towns in the state. Many fine old colonial buildings are still standing, of which the state-house is the most notable (see Fig. 44, page 70). The United States Naval

Academy is located here in a large group of handsome buildings. St. Johns College, the direct successor of the first public school in Maryland, being chartered in 1784, is also located at Annapolis. There are good transportation facilities by rail and steamboat lines. The chief industry is oyster dredging and packing.

CAMBRIDGE, the sixth city in the state, with a population of 5747, is the largest town on the Eastern Shore. It is the chief shipping point for the products of the fertile farming region which surrounds it. It has a good harbor, and its transportation facilities are excellent. The chief industries are oyster packing, canning of fruits and vegetables, manufacture of shirts, and of lumber products.

SALISBURY, with its population of 4277 people, is one of the most progressive towns on the Eastern Shore. It is an important shipping centre, and has numerous manufactures. Of these the most important are lumber products, especially baskets, crates, and barrels, for use in shipping the great quantities of small fruits grown in the vicinity, artificial ice, canned goods, bricks, fertilizers, etc.

CRISFIELD, the largest town in Somerset County, with 3165 inhabitants, is an important centre of the oyster, crab, and fish interests. In summer, it is said to be the largest crab-shipping point in the country.

EASTON, whose population is 3074, is one of the most important towns on the Eastern Shore. It is quite a railroad centre, and has important oyster interests and numerous small manufactures.

CHESTERTOWN is one of the oldest towns on the Eastern Shore, having been settled in 1706. It has a popu-

lation of 3008. It has a large strawboard factory, a carriage factory, and numerous other factories of less importance. Washington College is located here.

REVIEW QUESTIONS ON THE COASTAL PLAIN. — *Surface Features.* — Define the limits of the Coastal Plain. What proportion of the state does it include? How does the surface of the Coastal Plain differ from that of the Piedmont and Appalachian regions? How does the Maryland coast-line rank? What makes it so long? Into what two divisions does Chesapeake Bay divide the Coastal Plain? What counties are included in the Eastern Shore? in Southern Maryland?

Streams. — How were the Chesapeake and the wide lower ends of its tributaries formed? Name and locate some of the important streams flowing into Chesapeake Bay. Are there any important Maryland streams flowing directly into the Atlantic Ocean?

Railroads, Boat Lines, and Highways. — Trace the routes goods would take in going to Baltimore from Wicomico County; Kent County; Dorchester County; St. Mary's County; Anne Arundel County. Does the Coastal Plain have good highways?

Industries. — What is the chief industry of the Coastal Plain region? What are the chief crops grown on the Eastern Shore? How are most of the tomato and corn crops usually disposed of? What special agricultural industry flourishes at Berlin and elsewhere? Name the chief crops grown in Southern Maryland. Describe the tobacco industry. What important industries rank next to agriculture in the Coastal Plain region? What is Maryland's rank in the oyster-canning business? State a few important facts about the oyster industry; the shad industry; the menhaden industry; the crab industry. Where are the most valuable clays in Maryland found? What other mineral products are mined in the Coastal Plain? What is the relative rank of manufacturing as an industry in the Coastal Plain?

Cities and Towns. — Name six important towns in the Coastal Plain region. Which is the largest? Which is the capital of the state? Which is the largest on the Eastern Shore? Name some important facts about Annapolis; Cambridge; Salisbury; Crisfield; Easton; Chestertown. How would you travel from your school to the nearest large town? to Baltimore? to Washington? to Cumberland?

SECTION V

GOVERNMENT AND EDUCATION

Government. — The people of Maryland enjoy the same rights and privileges which all of the states enjoy from being a part of this land of freedom. Like the other states also it has its own government in affairs which concern the state alone. The people of the state elect the twenty-six state Senators and ninety-one Delegates of the General Assembly, which makes laws for the government of state affairs. They also elect a Governor, who appoints the Secretary of State and other less important state officials who assist him in the work of carrying out the laws made by the General Assembly. They also elect a large number of Judges, who decide all disputes in regard to the laws, hear trials for breaking them, etc. The General Assembly meets in the state-house at Annapolis in January of every other year and may remain in session ninety days. The Governor may also call an extra session if necessary. The state is divided into twenty-three counties and Baltimore City, which is not in any county. There are no townships, such as many states have, but the local affairs of the cities and towns are carried on by officers according to charters and special acts.

Education. — The first public school in Maryland was opened in 1696, more than two hundred years ago, at Annapolis. There are two separate public school systems

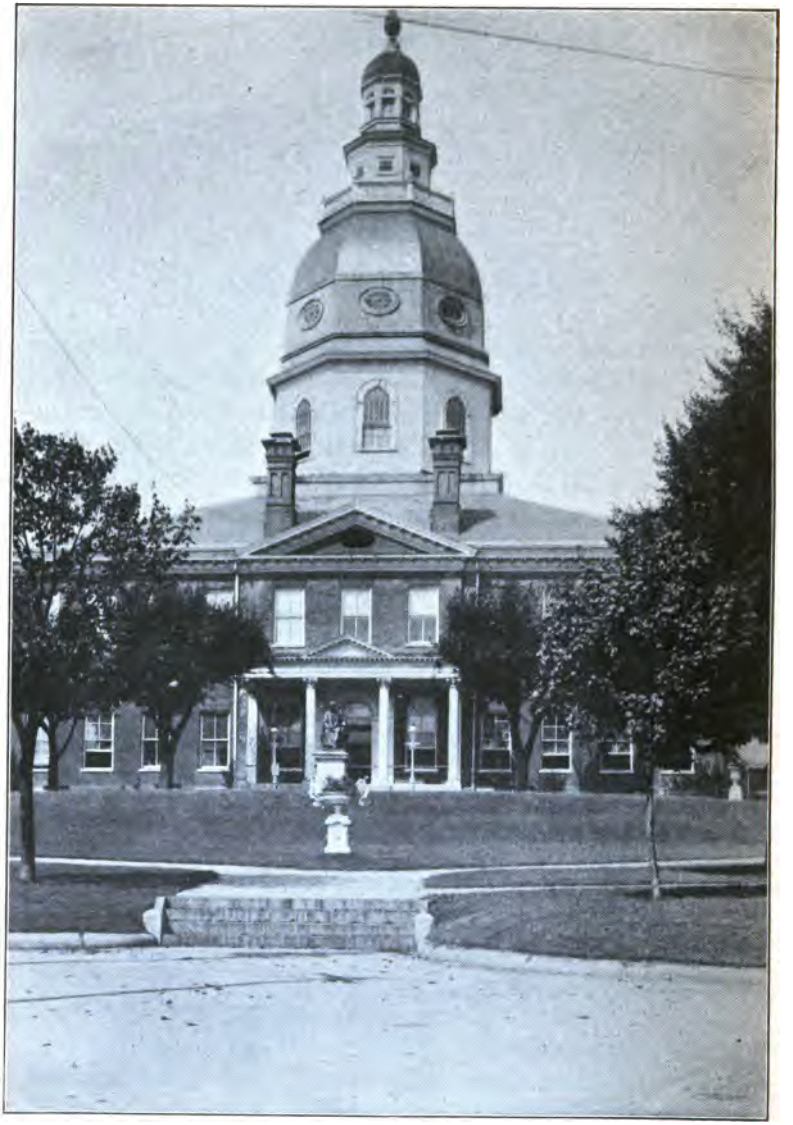

FIG. 44. — State-house, Annapolis.

now in operation in Maryland, one for the state, governed by a Board of Public Education, of which the Governor is the head, and the other for the City of Baltimore, governed by a City Board appointed by the Mayor. There is a State Superintendent of Public Education and a City Superintendent. There are two State Normal Schools for the training of teachers, one of them in Baltimore and one in Frostburg.

For higher education, there are a number of colleges of good standing in the state, the most important institutions being located in Baltimore, which is the educational centre of the state and one of the most important in the country. At the front stands the Johns Hopkins University. In foreign countries Baltimore is known chiefly as the place where the famous Johns Hopkins University is located. Among other educational institutions in Baltimore are the Woman's College, the Maryland University, Peabody Institute, College of Physicians and Surgeons, Maryland Institute, St. Mary's Seminary, Baltimore Medical College, Maryland College of Pharmacy, and the Baltimore College of Dental Surgery, the oldest college of dentistry in the world. Outside of Baltimore the most important institutions are St. Johns College at Annapolis, Maryland Agricultural College at College Park, Washington College at Chestertown, Western Maryland College at Westminster, and Mount St. Mary's College at Emmitsburg.

REVIEW QUESTIONS. — *Government.* — Name some of the rights and privileges you enjoy because you live in the United States. Who makes the laws for the state of Maryland? Who carry them out? Who decide disputes about them? How are the various public officials elected? How is Maryland divided? How are the cities and towns governed?

Education. — How long ago was the first public school in Maryland opened? What officials look after the public schools of the state? of Baltimore? Locate the State Normal Schools. Where is the educational centre of the state? Which is the most famous institution for higher education? Name some other institutions in Baltimore; outside of Baltimore.

APPENDIX

POPULATION OF MARYLAND, 1900

Total population	1,188,044	Native white	859,280
Males	589,275	Negroes	285,064
Females	589,769	Chinese	544
Native born	1,094,110	Japanese	9
Foreign born	93,934	Indians, taxed	8
Total white	952,424		

FACTS ABOUT THE COUNTIES

County	Area in Sq. Mi.[1]	Population, 1900	County Seat
Allegany	441	58,694	Cumberland
Anne Arundel	480	39,620	Annapolis
Baltimore	677[2]	90,755	Towson
Calvert	217	10,228	Prince Fredericktown
Caroline	317	16,248	Denton
Carroll	445	33,860	Westminster
Cecil	375	24,662	Elkton
Charles	462	17,662	La Plata
Dorchester	573	27,962	Cambridge
Frederick	660	51,920	Frederick
Garrett	681	17,701	Oakland
Harford	440	28,269	Belair
Howard	249	16,715	Ellicott City
Kent	281	18,786	Chestertown
Montgomery	518	30,451	Rockville
Prince George's	480	29,898	Upper Marlboro
Queen Anne's	363	18,364	Centerville
Somerset	329	25,923	Princess Anne
St. Mary's	369	17,182	Leonardtown
Talbot	267	20,342	Easton
Washington	457	45,133	Hagerstown
Wicomico	369	22,852	Salisbury
Worcester	492	20,865	Snow Hill
Total		679,087	
Baltimore City		508,957	
State total		1,188,044	

[1] The areas of the counties as given above are from recent data prepared by the Maryland Geological Survey.

[2] Includes Baltimore City.

POPULATION OF CITIES AND TOWNS OF MARYLAND

Towns, etc.	1900	1890	Towns, etc.	1900	1890
Aberdeen	600	448	Hillsboro	196	174
Annapolis	8,402	7,604	Hurlock	280	....
Baltimore	508,957	434,439	Hyattstown	81	....
Barnesville	125	....	Hyattsville	1,222	1,509
Belair	961	1,416	Keedysville	426	420
Berlin	1,256	974	Kensington	477	....
Bishopville	243	275	Laurel	2,079	1,984
Bladensburg	468	503	Laytonsville	143	....
Bloomington	395	295	Leonardtown	454	521
Boonsboro	700	766	Loch Lynn Heights	215	....
Bowie	443	....	Lonaconing	2,181	....
Bridgetown	50	....	Manchester	609	273
Brookeville	158	....	Middletown	665	667
Brunswick	2,471	....	Millington	406	485
Burkittsville	229	273	Mountain Lake Park	260	....
Cambridge	5,747	4,192	Mount Airy	382	....
Cecilton	447	485	New Windsor	430	414
Centerville	1,281	1,309	Northeast	969	1,249
Charlestown	244	228	Oakland	1,170	1,046
Chesapeake	1,172	1,155	Ocean City	365	85
Chestertown	3,008	2,632	Oxford	1,243	1,185
Church Hill	368	596	Perryville	770	344
Clear Spring	474	....	Piscataway	95	....
Crisfield	3,165	1,565	Pocomoke	2,124	1,866
Crumpton	207	317	Poolesville	236	....
Cumberland	17,128	12,729	Port Deposit	1,575	1,908
Damascus	148	....	Preston	192	....
Darlington	260	239	Princess Anne	854	365
Deer Park	293	179	Queenstown	374	....
Delmar	659	....	Ridgely	718	215
Denton	900	641	Rising Sun	382	384
East New Market	1,267	....	Rockville	1,110	1,568
Easton	3,074	2,989	St. Michael's	1,043	1,329
Elkton	2,542	2,318	Salisbury	4,277	2,905
Ellicott City	1,331	1,488	Sharpsburg	1,030	1,163
Emmitsburg	849	844	Sharptown	529	427
Federalsburg	589	543	Smithburg	462	487
Frederick	9,296	8,193	Snow Hill	1,596	1,488
Frostburg	5,274	3,804	Sudlersville	221	125
Funkstown	559	....	Takoma	756	164
Gaithersburg	547	....	Taneytown	665	566
Garrett Park	175	....	Thurmont	868	....
Girdletree	336	....	Trappe	279	251
Grantsville	175	....	Union Bridge	663	743
Greensboro	641	902	Upper Marlboro	449	439
Hagerstown	13,591	10,118	Walkersville	359	255
Hampstead	480	521	Westernport	1,998	1,526
Hancock	824	815	Westminster	3,199	2,903
Havre de Grace	3,423	3,244	Williamsport	1,472	1,277

MARYLAND'S INDUSTRIAL RANK AMONG THE STATES IN 1900[1]

Oyster canning	1	Cotton goods	18
Fertilizers	1	Paper making	18
Shipbuilding	2	Foundery and machinery	14
Preserving foods	2	Planing mill work	15
Tobacco manufactures	6	Meat packing	15
Cigars, etc.	10	Flour and grist	19
Iron and steel	10	Lumber	32
Furniture	10		

[1] Rearranged from "Maryland As It Is."

MARYLAND MINERAL PRODUCTS[1]

The following table contains the values of the average output of Maryland mineral products during recent years:—

Coal		$3,750,000
Brick and tile		1,100,000
Pottery		500,000
Kaolin		10,000
Flint		27,500
Sands		50,000
Marls		5,000
Silica, or tripoli		5,000
Iron ore (carbonate)		20,000
Mineral paints		80,000
Building stone—		
Granite and gneiss	$500,000	
Limestone	80,000	
Slate	100,000	
Marble and serpentine	80,000	
Sandstone	30,000	
Gabbro	5,000	
Miscellaneous	5,000	
		800,000
Cement—		
Rock cement	$180,000	
Portland cement	20,000	
		200,000
Lime (agricultural and building)		720,000
Gold		500
Road materials		100,000
Mineral waters		35,000
Total		$7,408,000

MARYLAND WATER PRODUCTS[1]

The following table presents what is regarded as a fair estimate of the annual catch, and its value for each of the species mentioned:—

Oysters	5,000,000	bush.	$3,500,000
Shad	2,250,000	fish	200,000
Menhaden	92,000,000	lbs.	800,000
Mackerel	1,200,000	"	120,000
Bay trout	11,100,000	"	450,000
Bluefish	4,400,000	"	260,000
White perch	14,000,000	"	1,120,000
Yellow perch	11,000,000	"	440,000
Fresh herring	100,000,000	"	1,000,000
Rock fish	14,000,000	"	1,400,000
Mixed fish (flounders, pike, pickerel, etc.)	10,000,000	"	500,000
Hardshell crabs	750,000	bush.	340,000
Softshell crabs	700,000	doz.	325,000
Terrapin			50,000
Clams	5,000,000		15,000
Total			$10,020,000

[1] From "Natural Resources of Maryland."

Reference Books and Maps

"Maryland, Its Resources, Industries, and Institutions." Written for the World's Fair by members of Johns Hopkins University and others. Baltimore, 1893.

"The Physical Features of Maryland," by William Bullock Clark. In Vol. I of Reports of Maryland Geological Survey. Baltimore, 1897.

"The Physiography of Maryland," by Cleveland Abbe, Jr. In Vol. I of Reports of Maryland Weather Service. Baltimore, 1899.

"Maryland Building Stones," by Edward B. Mathews. In Vol. II of Reports of Maryland Geological Survey. Baltimore, 1898.

"The Clays of Maryland," by H. Ries and members of the Maryland Geological Survey. In Vol. IV of Reports of the Survey. Baltimore, 1902.

"Maps and Reports on the Counties of Maryland," by the Maryland Geological Survey. The following have been published: Topographic, Geologic, and Soil Maps and accompanying Report, Allegany, Garrett, and Cecil counties. The three maps, report not yet published, St. Mary's and Calvert counties. Topographic map only published, Harford, Worcester, Prince George's, and Kent counties.

Fine maps made by the U. S. Geological Survey in coöperation with the Maryland Geological Survey, covering the larger part of Maryland, can also be obtained from the Maryland Geological Survey. Each map covers an area of about 250 square miles and costs but 5 cents. The region between Rockville, Westminster, and Hagerstown has not yet been mapped.

"Maryland As It Is." Published by the Maryland Board of Public Works. Baltimore, 1903.

"Maryland and Its Counties." In the 12th Annual Report of the Maryland Bureau of Statistics. Baltimore, 1903.

"The Coals of Maryland," by William Bullock Clark, G. C. Martin, and others. In Vol. V of the Reports of the Maryland Geological Survey. In press.

Map of Maryland. 50 × 33 inches. Published by the U. S. Post Office Department, Washington, D.C. Price, 80 cents.

"The Natural Resources of Maryland." A pamphlet issued by the Maryland Geological Survey.

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